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THE N64 BOOK

THE ULTIMATE COLLECTOR'S GUIDE TO NINTENDO 64

THE MACHINE

- The N64's history
- Key developers
- What to collect
- The Expansion Pak
- The N64 DD

THE HIT GAMES

- GoldenEye 007
- Perfect Dark
- Super Mario 64
- Banjo-Kazooie
- The Legend Of Zelda: Ocarina Of Time
- Doom 64
- Mario Kart 64
- Donkey Kong 64
- Lylat Wars
- Pilotwings 64
- F-Zero X

FORGOTTEN CLASSICS

- Beetle Adventure Racing
- Jet Force Gemini
- Shadow Man
- Blast Corps
- Pokémon Stadium

Over 60 iconic games inside

Welcome to

THE N64 BOOK

Nintendo's 64-bit console had a fight on its hands when it arrived in 1996. Sony's first console, the PlayStation, had launched 18 months previously in Japan and was quickly gaining a strong foothold, both in the East and in the West. For the first time in its console history, Nintendo was playing catch-up. While it wasn't quite able to match Sony's conquering console, the Nintendo 64 remains an integral addition to any gamer's collection. Indeed, the prices of its games continue to rise, an indication of its success and popularity, and it's telling that some of the Nintendo 64's greatest games – including *Super Mario 64* and *The Legend Of Zelda: Ocarina Of Time* – are still considered benchmarks of their respected genres today. You'll find both games along with many other classics in this special tome. From the creation of *Pilotwings 64* and *Banjo-Kazooie* to an in-depth collector's guide, we've left no stone unturned to create an essential book that no N64 fan can afford to be without.

In association with retro* GAMER magazine

THE N64 BOOK

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THE N64 BOOK

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NINTENDO 64: A CELEBRATION

It's amazing to think that Nintendo's 64-bit console recently passed its 20th anniversary. To celebrate this momentous occasion we reveal 64 essential things that make us love the system

» *Super Mario 64* broke boundaries upon its original release. It's still an incredible experience.

20-Year Anniversary

02 64-BIT POWER

■ Atari may have claimed to have the first 64-bit console, but in reality the Jaguar used 64-bit architecture in conjunction with two 32-bit RISC processors and a 16/32-bit Motorola 68000, while the N64 offered true 64-bit power. Today, 64-bit processors can be found in all gaming systems and the architecture has become the standard for the industry. However, it was Nintendo's forward-thinking and that vital team-up with Silicon Graphics which paved the way for this revolution; while Sony and Sega were happy with 32-bit machines, the Big N strived to go one better and broke new ground as a result.

01 THE CONSOLE

On paper, the Nintendo 64 seemed like a huge gamble back in the mid Nineties. It was built on Silicon Graphics technology that was unproven in the games arena, it used cartridges at a time when the industry was shifting towards cheaper and more spacious optical media and it came bundled with a bizarre-looking controller that only made sense when it was in your hands. However, taken in a wider context, it's easy to see why Nintendo's higher-ups were supremely confident about the console's chances; following the stunning commercial success of the NES, Game Boy and SNES, the Japanese firm was unquestionably the company to beat at the time and the N64 was viewed by many as the platform that would continue Nintendo's dominance.

Of course, the benefit of hindsight means we now know that things didn't quite go according to plan. Still smarting from being jilted by Nintendo a few years previously, Sony gatecrashed the games industry and thoroughly embarrassed 'The Old Guard',

» Many PlayStation owners scoffed at the N64. That soon changed upon playing *GoldenEye*.

» Many fans still regard *Ocarina Of Time* as the best ever *Zelda* game.

gaining the unflinching support of key third-parties such as Konami, Capcom, Namco and – possibly most painful of all for Nintendo – SNES stalwart SquareSoft. These days the notion of a Nintendo console relying almost solely on first-party software isn't all that shocking – the Wii U has certainly been in that boat – but the N64 arguably marked the first time that the Kyoto veteran found itself wanting in terms of publisher and developer support. The vast majority of the console's big hitters were all home-grown efforts, or came from second-party studios firmly ensconced beneath Nintendo's wing. The pattern began with the sublime launch title *Super Mario 64*, and would continue all the way up to *The Legend Of Zelda: Majora's Mask* and Rare's excellent *Banjo-Tooie*. The N64 was a machine that you bought primarily to play Nintendo games.

While the lack of *Final Fantasy* and *Street Fighter* may have curtailed the commercial success of the N64, the fact that it became so closely linked with Nintendo's own output ironically made it feel all the more special. While Sony was largely reliant on other companies to produce its bestselling PlayStation games and Sega's short-burst arcade conversions began to lose their appeal in the living room as players demanded more bang for their buck, it fell to Nintendo's crack network of internal studios to produce the kind of groundbreaking software that defined the era. The aforementioned *Super Mario 64* laid down the foundations of the 3D action genre, influencing not only hordes of

THE N64 KID

YouTube sensation, Brandon Kuzma, is all grown up, but he still loves the N64

Did you know you were getting a N64 or was a surprise?
We were told by our parents it was never gonna happen... 'melts your brain' and all that. So to see it under the wrapping paper felt unreal. For a second I thought it was too good to be true, and that there had to be a catch. Well, it turned out there was... we weren't allowed to buy any games. The plan was to rent from blockbuster, however this didn't last long.

Why did you upload your video and did you expect it to go viral like it did?
We would always would raid this chest of VHS-C home movies to watch as our form of entertainment back then... my dad always documented everything. That N64 moment was always a classic tape we'd laugh at, along with the time my aunt accidentally nailed her six-year-old son in the face with a snowball from 50 feet away. Anyways, I was into making websites to show videos on that I would make. YouTube didn't really exist then or at least I didn't know about it yet. So, one day I uploaded the video straight into the html code and sent it to my buddy to see if he thought it was funny with the added slowmo. From there, I posted it to a skateboard filming forum called skate perception, and [without me knowing] someone by the username 'raw64life' uploaded it to YouTube (youtube.com/user/raw64life). About a week later, I checked my MySpace and noticed I had pages upon pages of friend requests and didn't know why. It took a couple days to realise it was on YouTube, and was getting a lot of attention.

What is it about the console that you like so much?
Man, it just felt *right*.

Why do you think the N64 remains so popular?
For us Eighties and Nineties kids, I think it could mainly be linked to nostalgia. Pure joy of finding something new, and letting your brain get lost. But the new generation that didn't grow up with it, I think are intrigued just from hearing about this legendary console from everyone else. I mean... it's *Nintendo*.

03 GOTTA COLLECT 'EM ALL

■ Limited edition consoles are all the rage nowadays, but before the days of the N64 they were a relative rairty. Sure, you had various systems that were packaged with popular games, but you rarely had different coloured models and matching joypads. Nintendo's console was one of the first to run with the idea, and, alongside Sega's Saturn, ensured that hardware collectors always had different variations to add to their growing collections. Whether it was a gorgeous-looking gold console or the colourful Pikachu model there was something for everyone.

KEV BAYLISS

The ex-Rare industry veteran spills his love for Nintendo's console

What's your favourite N64 game and why?
Easily *Mario 64*, because it was the first 3D game I fell in love with. Excellent graphics, an immersive world and fantastic gameplay – I played it for weeks. In fact, I think I'm going to have to play it again soon, now that I've reminded myself just how good it was, and still is!

As a developer, what was your favourite element of the N64 hardware?
Hard to say really, it was a leap forward from 2D graphics, so of course the whole development process was completely different. This was very exciting and offered us so many possibilities when designing levels, and character control too.

What were your first thoughts when you picked up that unique controller?
The controller had suddenly also become three-dimensional, and rather than a keypad, we now had a joystick which gave us much more control over a character's movement. I used to play around with the controller when creating *Diddy Kong Racing* and amuse myself for hours by making the car manoeuvre in so many different ways which would not have been possible on any previous Nintendo controller.

Thinking back, what aspect of the N64 would you have changed if you could?
If I could have changed anything I would have loved larger capacity for textures. We managed to squeeze a lot more from the hardware on later projects, but I think that you were always wanting a larger texture resolution for your graphics. On the other hand we had to make as best use out of the small texture dudes as we could, which taught us to be more creative and also helped create a unique look for many N64 games. Oh, and the look of the console itself, I absolutely hated it back then, but now I look and see all of these fancy ones in orange and other cool colours, which makes me want to buy one again.

» Nintendo's console excelled at multiplayer gaming, so titles like *Micro Machines 64 Turbo* were plentiful.

04 THE IMPORTANCE OF SILICON GRAPHICS

■ In the early Nineties, Silicon Graphics was seen as the pinnacle of computer graphics hardware. When computer-generated visuals began to surface in Hollywood, it was Silicon Graphics' hardware doing the heavy lifting – between 1995 and 2002, every film nominated for an Academy Award for Distinguished Achievement in Visual Effects was created using a Silicon Graphics system. The cachet which came with the name helped Nintendo build anticipation for the N64. By teaming with the company, the Kyoto firm was sending out a clear message to its rivals and the industry at large – 'We're dealing with the future, everyone else is in the past.'

'me-too' cute and cuddly platformers, but also establishing the framework which practically every 3D title would adhere to over the next 20 years. *The Legend of Zelda: Ocarina Of Time* took the stale adventure genre and did the same trick, offering players the kind of immersive 3D world that had previously been confined to their imaginations. Other standout releases – such as *Star Fox 64*, *F-Zero X*, *Pilotwings 64* and *Mario Kart 64* – all proved that when it came to creating the best, Nintendo was practically untouchable.

Then there was Rare. The legendary UK studio is now part of Microsoft's empire and – if you were feeling particularly uncharitable – could be seen as struggling to match its Nintendo glory days, but during the N64 period it was revered as one of the world's leading development lights and augmented Nintendo's own first-party content with some of the best titles of the generation. Rare established its reputation on the NES, Game Boy and SNES, but it would be on the N64 that the Twycross firm truly cemented its position in gaming history. Early titles like *Blast Corps* and *Killer Instinct Gold* showed a company getting a feel for the tech, but it would be later releases like *Diddy Kong Racing*, *Banjo-Kazooie* and *GoldenEye 007* which would turn heads and win over a generation of new fans. The latter was a particularly potent weapon in the console's armoury; not only did it outgun many first-person shooters on the PC, it flew in the face of the popular opinion that games based on movies were uniformly terrible. Bond's penchant for shooting baddies in the face also ran contrary to Nintendo's squeaky-clean, family-friendly image, but it was precisely this kind of content that the company needed to fight back against Sony's 'cool' and 'mature' PlayStation. In fact, the N64 was perhaps the first time that Nintendo made the conscious effort – in the west, at least – to balance its software output between its 'safe', kid-friendly titles and games aimed at the players which had grown up alongside the company's 8-bit and 16-bit systems and now demanded experiences of a more mature persuasion.

05 STICKING WITH CARTRIDGES

■ Many critics will state that Nintendo's decision to stick with cartridges when the entire industry was moving to CD-ROM cost it dearly, and it's certainly true that the decision resulted in expensive games, annoyed publishers and limited storage space. However, it also meant that loading times were almost non-existent when compared to CD, and developers were able to harness increased access speed to build more convincing, immersive worlds. On a more superficial level, it's much more satisfying plugging in a cartridge than it is inserting a CD-ROM – something that has become even more apparent over the past two decades.

"I used to play around with the controller when creating Diddy Kong Racing"

Kev Bayliss

» Nintendo's console had a number of great exclusives, this is the rather spiffy *Doom 64*.

Of course, software was just one side of the N64's appeal. While it could be argued that the console's chunky, plastic design was something of a throwback when compared to the sleek, consumer electronics look of the PlayStation, Nintendo's console retained the playful, toy-like aesthetic which made the firm's previous hardware so appealing and approachable. From the colourful buttons on the pad to the satisfying, old-school sensation of inserting cartridges, the N64 tried to maintain links with the past while simultaneously pushing the boundaries of the industry. Nowhere was this more apparent than in the design of that iconic controller; a three-pronged affair which could be held in a variety of ways depending on the game in question. For titles like *Killer Instinct*, the eight-way D-pad was the input of choice, but *GoldenEye 007* required you to grip the middle of the pad so you could access the analogue stick and Z-trigger, the latter of which was found on the underside of the unit. Analogue control wasn't new to the games industry, even back in 1996, but Nintendo was the first hardware maker to bring it to such a large number of players. The moment you realised that you could make Mario shift from a saunter to a spring with just a little push of the stick told you all you needed to know – this was an absolutely groundbreaking move in game control and it's little wonder that Sony and Sega quickly released their own analogue interfaces, a clear admission that both publishers had been caught napping.

The history books are pretty clear – PlayStation: over 100 million sold worldwide, N64: 32 million – but pure sales figures surely cannot be seen as a true indicator of worth in this case. Siding with Sony during this particular console war meant missing out on some stunning videogames, games which would influence the course of the industry for years to come. Where would the console FPS genre be without *GoldenEye*? Would we have such assured 3D action titles without *Mario 64*? How much additional catching up would have been required in the realm of 3D adventure games were it not for the existence of *Ocarina Of Time*? When would analogue control have become standard had Nintendo not taken the plunge, given than both Sony and Sega decided against bundling such pads as standard? These are all questions which we don't have to ponder, as the N64 – despite losing out to the PlayStation in the long run – ended up being far more influential than its sales total would suggest. That's Nintendo's Midas touch.

20-Year Anniversary

CHRIS SUTHERLAND

The Playtonic maestro revisits Rare's halcyon days on the N64

What was the N64 like to program for?

This was the first time some of the Rare engineers had coded in C – until then, everything had been written in assembly language.

Going from assembler, where you hand-coded every instruction the processor used, to C where you were more reliant on the ability of the compiler made a few folks wary at first – people were asking: 'Could we trust the compiler to do a better job than humans?'

In some ways, the machine felt underpowered, possibly because we'd previously been working with high-end prerendered visuals displayed as animating 2D sprites, so having to render everything in real time meant the number of moving items on the screen was less than we'd been used to. That seems kind of weird when we think of consoles these days and we expect each one to be more x times powerful than that the previous, but here this was transitioning to a different way of displaying and interacting with games, and the starting point was quite basic.

Why Was Rare able to get so much out of the N64?

There's a few reasons, all of which related to extra development time! First, we were probably one of the first studios to have access to an N64 devkit. Second, the Rare teams had been used to working with 3D models previously, so, although the tools may have been a bit different and we had to actually lower our polygon count and texture sizes, we were up to speed with the principles. Thirdly, some of our games actually had 'extra development practice time' before they started development - *Banjo-Kazooie* had about an extra year of previous work as '*Dream*' and *Conker's Bad Fur Day* began as '*Twelve Tales*'. Although much of the code and assets may have been redone, the earlier phases meant various tools and workflow could be put in place. Finally, Tim and Chris had a 'ready when it's ready' approach. This approach would I believe have been sustained via sales from Rare's NES/SNES titles.

What's your favourite N64 game and why?

It's hard to justify choosing anything other than *Mario 64* for showing how a platformer could work in three dimensions. But I'm going to choose... *GoldenEye 007*, and not specifically because it was a Rare title, but because a group of us played four-player split-screen for pretty much every lunchtime over several years!

What were the N64's strengths?

Being the first console where games could display real-time rendered visuals – being first means a lot if you are exploring new methods of play. The controller: the idea of an analogue stick was a revolutionary jump. But, ultimately, it was the software that set it apart – in particular with the genre-defining *Mario 64*.

DEFINING MULTIPLAYER

06

The N64 ushered a new era of multiplayer and set the standard for years to come

While it's important to remember that the N64 wasn't the first console to feature four controller ports, it standardised them going forward. The Atari 5200 beat it to the punch and several systems featured ways of adding controllers, but the N64 wore its multiplayer endorsement on its sleeve. Many games were built with four controllers in mind, meaning multiplayer gaming nights became the norm rather then the exception.

07

Sam Picks...

1080° SNOWBOARDING

■ *Cool Boarders* may have paved the way for the over-the-top likes of *SSX*, but *1080°* was the more intelligent and complex game. Controls seemed complicated at first but once you got into the flow, gliding down the mountains felt both effortless and empowering, and landing a perfect trick was just the best feeling.

08

SUPER SMASH BROS. 1999

■ Nintendo's unconventional brawler is still one of the finest multiplayer games on the N64. The 12 available characters all play very differently to each other – as well as assure that popular Nintendo franchises are suitably represented – while the relatively cramped stages ensure that you'll always be involved in a frantic scrap. Although the mechanics have obviously been refined in the later *Smash Bros.* games – notably in its direct GameCube sequel, *Super Smash Bros. Melee* – there's still something wonderfully pure and fun about the original.

09

MARIO PARTY 1998

■ *Mario Party* was a big success for Nintendo and it's easy to see why. It features all the company's most famous characters, from Mario to Kirby, and sees them all battling for supremacy in 50 varied mini-games. The progression around the large, interactive game boards could be a little long-winded at times, but the entertaining mini-games more than made up for it. Whether you're blowing up Koopas to make them burst, diving for treasure or simply walking across tightropes, the gameplay was constantly entertaining and filled with variety.

10

TUROK: RAGE WARS 1999

■ Although it received a relatively lukewarm reception from critics upon its 1999 release, *Turok: Rage Wars* earned itself a place in N64 cartrige slots thanks to its four-player action. Like Rare's *Perfect Dark*, it introduces AI bots to multiplayer, too. Unlike its stablemate, however, *Turok: Rage Wars* is purely a multiplayer experience, channelling the chaotic pace of *Quake III* but adding in dinosaurs and some truly brutal weapons for good measure. Icky weapons, well-designed levels and the ability to play as a raptor meant that you'd be having fun for a while...

20-Year Anniversary

DUNCAN BOTWOOD

Perfect Dark's level designer revisits Rare's awesome multiplayer game

What did the Expansion Pak bring to *Perfect Dark*?
The single-player game, to be brutally honest. If you didn't have the Expansion Pak you only had access to the multiplayer game.

What improvements did it offer over *GoldenEye*?
We had a more mature art process for creating and texturing environments and a more coherent sense of what the gameplay should be from the start. The multiplayer was much more extensive and we pushed hard on the customisation options. Most of the audience reaction from *GoldenEye* was to do with the multiplayer so we wanted to make sure that it got more dev time. Not tricky – *GoldenEye*'s multiplayer mode was made in six weeks by two people.

How integral do you feel that the AI bots were to *Perfect Dark*'s multiplayer?
They were awesome. Full kudos should go to the coders that worked on them. They added so much with just simple character rules (e.g. kill the player who killed me last; kill the scoreboard leader, etc.). They effectively added a single-player challenge mode, a multiplayer co-op mode *and* a free-for-all brawl mode to the game. And I think you had access to that without the Expansion Pak.

What were the main improvements over *GoldenEye*'s multiplayer for you?
A better range of options for customising the game by swapping out any and all of the items that appear in the maps, changing the game rules like number of lives and so on. You could even add a health handicap to level the playing field between high and low skilled players. Then you could save your settings to the Controller Pak and take them to your friend's house if you needed to – the combat sims, too, of course.

What's the best weapon in the multiplayer mode for *Perfect Dark* and why?
The Laptop Gun. Decent SMG with an above average mag size... and then a turret. The FarSight was a little too tricky to use to be the best weapon, and you were reasonably safe from it if you kept moving. The Laptop Gun suits a sneaky horrible person, like myself, who likes setting traps for other people.

What's your favourite N64 game and why?
Smash Bros., beyond a shadow of a doubt. *Smash Bros. Melee* is a close second – but it's on GameCube. Peerless design and implementation. Who knew Kirby was such a stone-cold killer? Who knew Ness could be so annoying? Falcon Punch? Yes, Captain. Yes you can.

MARIO KART 64 1996

■ We nearly didn't include *Mario Kart 64*, due to the inclusion of the Blue Shell, but that wouldn't be fair to it. Even though the shell is massively overpowered, there are plenty of reasons why *Mario Kart 64* was an essential multiplayer experience. While the tracks are a little on the wide side, they're all great fun to race around and are filled with all manner of obstacles to negotiate. As entertaining as the Versus Mode of *Mario Kart 64* was, it was the insanely hectic Battle Mode (where you must burst your opponents' three balloons), which really fuelled competitive play.

PERFECT DARK 2000

■ We know what you're thinking: 'Where's Bond?' Well, we are going to say this rather quietly, but *Perfect Dark* was far better than *GoldenEye*. There were better-designed levels, excellent new weapons (including the Laptop Gun) and the same tight controls that worked so well in *GoldenEye*. Oh and it used AI bots, too, ensuring you could always play, even when you were on your own. There's even an excellent co-operative mode, allowing you to go through the entire game with a friend. Stand down, 007: we're going with Joanna Dark for FPS supremacy.

13 A RARE TALENT

Nintendo's right-hand studio boasted brilliance...

It's almost impossible to state just how important Rare was to Nintendo during the late Nineties. If the Twycross-based developer had been good on the SNES – delivering one key trilogy of games, *Donkey Kong Country* – but it was phenomenal on the N64, cranking out excellent games at a furious pace for the entire life of the console – and most of them were original properties, too. How do you even pick which games to focus on with a line-up this good? For you, dear reader, we shall try...

BLAST CORPS 1997

■ If any of Rare's N64 games can be considered to have flown under the radar, it was this carnival of destruction. The premise is that stuff needs to be knocked down, and you are the only person that can do it – whether that's in a bulldozer, a massive dumptruck, or even a jet-fuelled robotic smashing machine. There's a primal thrill in breaking things, and this game captured it perfectly.

DIDDY KONG RACING 1997

■ Only a madman would try to fit a racing game into an adventure format – but Rare was full of madmen and they made it work. Diddy Kong, Banjo, Tiptup and friends race across a variety of stages, using hovercrafts and planes to add variety to the regular karting gameplay. With bright visuals, jolly music and memorable boss races, it was a highlight of many an N64 gamer's collections.

BANJO-KAZOOIE 1998

■ Who'd have guessed that a project that started on the SNES would become one of the top N64 games? Aside from the lovable bird and bear duo that give the game its title, the appeal of *Banjo-Kazooie* lies in the sheer amount of stuff to be done – you have so many moves at your disposal, and every level is packed with objects to find and tasks to complete. This was platforming's peak.

JET FORCE GEMINI 1999

■ Blasting aliens has been a fun part of videogaming since *Space Invaders* and *Jet Force Gemini* was Rare's attempt to bring that sci-fi violence to the N64. It lives up to the developer's high standard of presentation, while offering a boatload of baddies to tear apart with lasers. Plus, the bear-like Tribals are adorable, making saving them worthwhile – even if the controls weren't perfect.

CONKER'S BAD FUR DAY 2001

■ Once upon a time, Conker was a sweet-natured platform game mascot, but Rare warped him into the filthiest animal we now know – and we're thankful for it. Nintendo declined to publish this game, which featured vomiting, alcohol, profanity, violence and, of course, a singing pile of poo. It was also a highly-enjoyable game, which is why you'll be lucky to find a copy for under £80.

Q&A: CHRIS SEAVOR

We sit down with the filthy animal who brought Conker to the N64

What's your favourite N64 game and why?
Ocarina Of Time. I came late to the *Zelda* games when I bought a cheap SNES not long after I started at Rare, and I've loved them ever since. It's also a rather good 'Design 101' handbook which I often return to for inspiration when I get into a rut with my own fumblings. 'Classic' is an overused term in the industry today, but *Ocarina* defines the word.

As a developer, what was your favourite element of the N64 hardware?
The controller was a revelation, although when I first saw the prototype I thought, 'WTF is that?' It had the functionality of the released version but not the aesthetic. However, once you picked it up and got a feel for it I understood this was something different. Doesn't matter a jot what the hardware can do if the point of contact doesn't compliment the games it will run. Of course, as always with Big N, the controller is developed in tandem with the software it will touch.

How did you feel about Nintendo sticking with cartridges for the N64?
Fine. In fact, I like cartridges! Fast access outweighed the main disadvantage of the smaller storage size by a mile, and again it fitted into the type of games Nintendo were making... FMV? Nah, that shit got old quickly, and no one said the load times on the PS were awesome.

What aspect of the N64 would you have changed?
Memory for textures was very limiting. They were tiny, and if you wanted any alpha as well they were microscopic. The youngsters today making levels and characters don't know how lucky they are! Having said that, these restrictions also allowed Rare to shine, because (and let's be honest) we really pushed the boundaries of the system graphically, more so than Nintendo.

Luke picks...

SPACE STATION SILICON VALLEY

■ Original puzzle games were few and far between on the N64, but at least here I got the robotic animal silliness of *Space Station Silicon Valley.* Possessing creatures granted abilities to help reach new areas and overcome challenges. Truly an overlooked gem in the N64's library.

TAKING CONTROL

20

The 'Trident' introduced innovations that would be copied for years to come...

Having successfully innovated with its previous NES and SNES controllers, Nintendo wasn't content to deliver a conservative evolution for its bold new 64-bit console's controller – instead, it delivered an eclectic mixture of classic elements and new features which showed dedication to the 3D gaming future. The resulting unique design became an integral part in not only the N64's legacy but gaming as a whole.

20-Year Anniversary

EXPANSION PORT

■ The ability for controllers to host secondary peripherals was rare before the N64 came along, and it was a feature that got good use. Controller Paks could store additional save data, and the Rumble Pak added force feedback – a feature which soon became standard. Additionally, the Transfer Pak allows players to read data from their Game Boy cartridges.

C-BUTTONS

■ It might seem odd that the N64 controller should have six face buttons, only to make four of them smaller and brand them collectively as C-buttons. However, it's a sign that Nintendo was thinking about 3D game design on a different level to everybody else – these were intended for camera control, hence the assigned directions.

ANALOGUE STICK

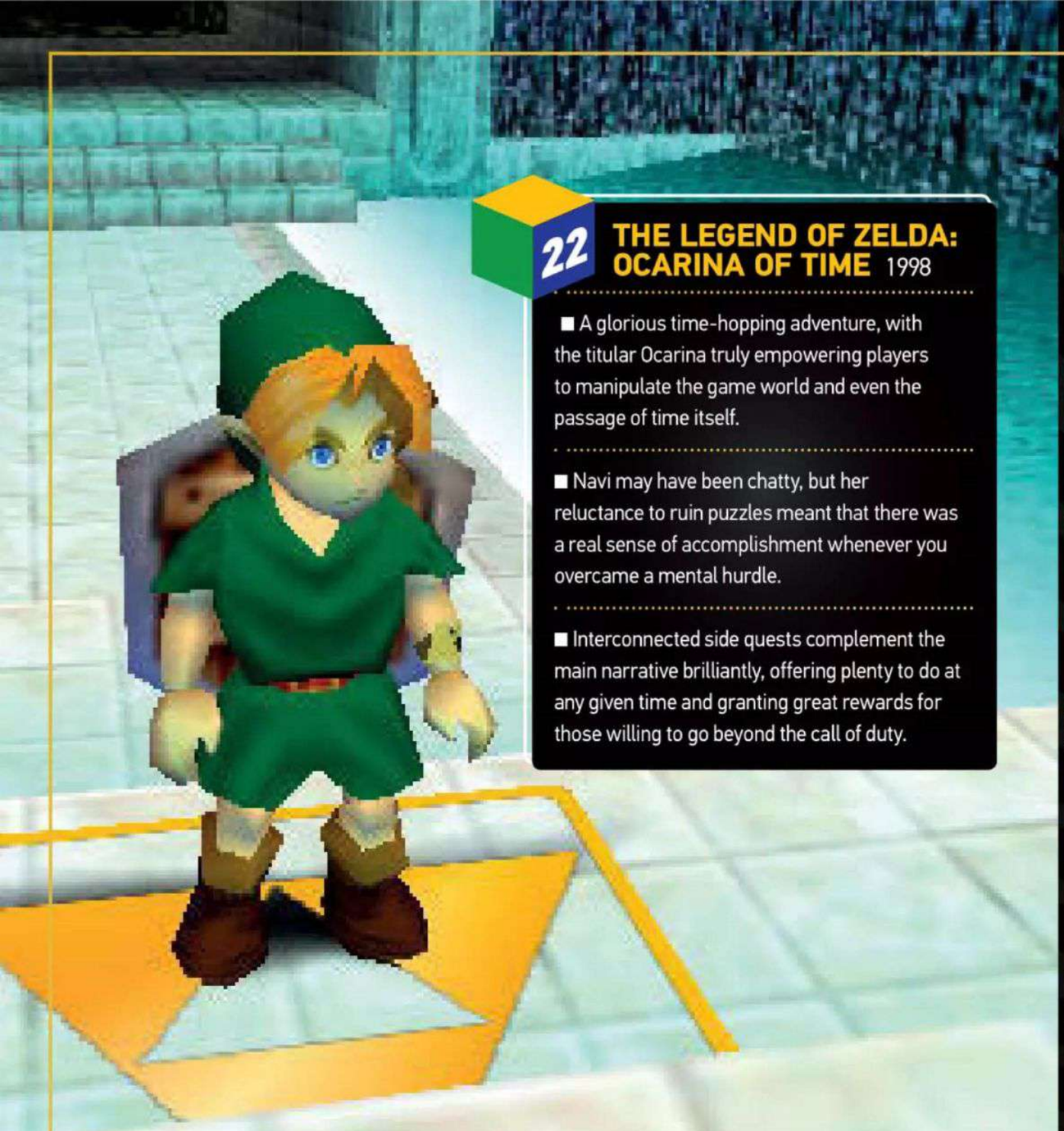
■ Analogue control dates back to the very earliest days of gaming, but by the mid-Nineties it had been relegated to arcade cabinets and oddball peripherals like Namco's NeGcon. The N64 controller correctly identified the need for more precise movements in 3D games, and other manufacturers swiftly followed Nintendo's lead.

THE TRIDENT

■ The N64 controller was different to anything that had come before, and nothing since has been quite like it. This was in large part due to its three-pronged design, which was intended to make the controller comfortable to use whether you were playing with the D-pad or the analogue stick. It's a divisive design, but an undeniably innovative one which has its fans.

THE Z-TRIGGER

■ Nobody was putting buttons on the backs of their controllers before the N64 came along, but the trigger under the middle prong of the controller was a stroke of genius – it was comfortable and easily accessible. The idea has been a staple of controllers ever since, with triggers featuring on the Wii controller as well as other manufacturers' designs.

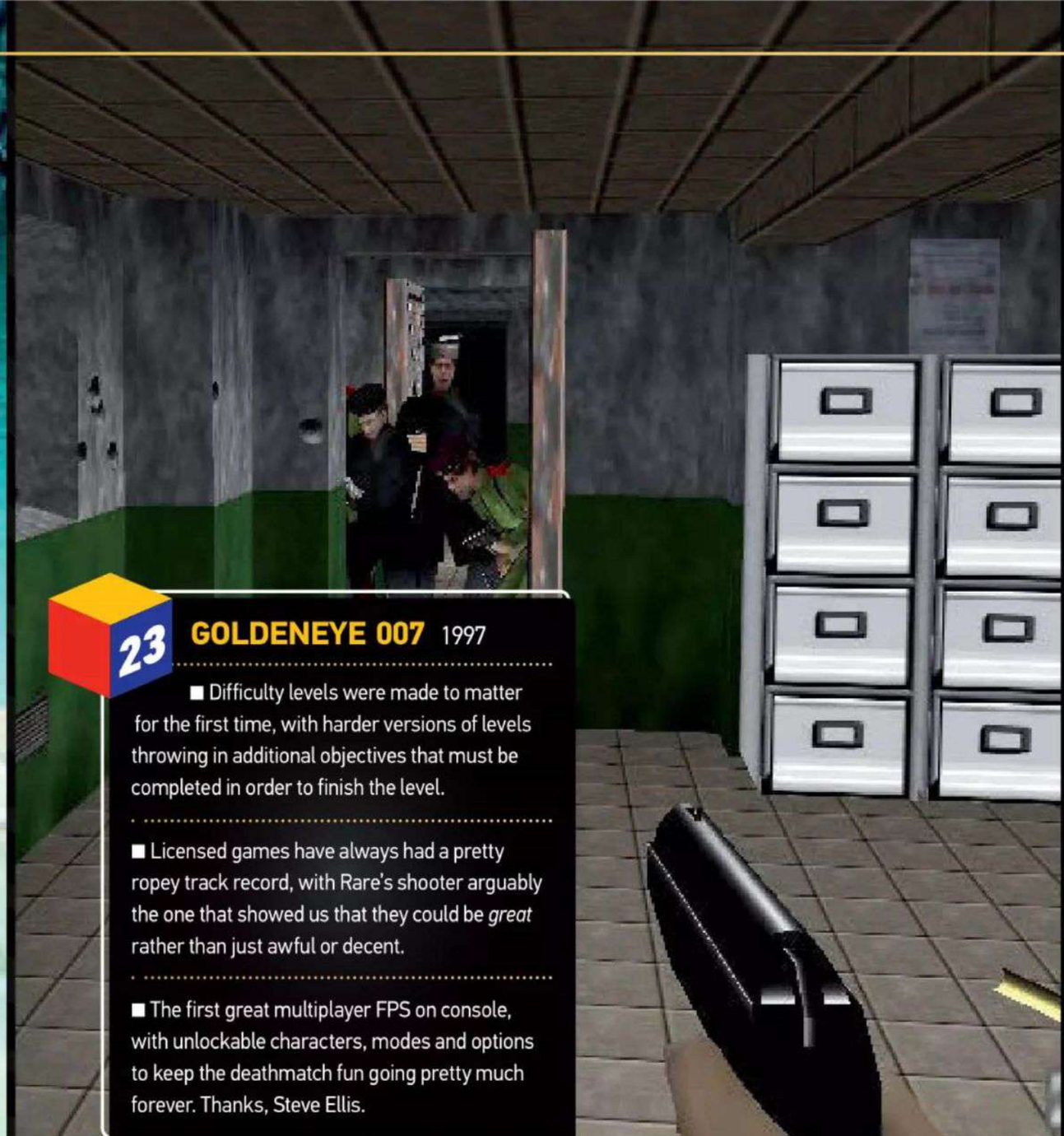


22 THE LEGEND OF ZELDA: OCARINA OF TIME 1998

■ A glorious time-hopping adventure, with the titular Ocarina truly empowering players to manipulate the game world and even the passage of time itself.

■ Navi may have been chatty, but her reluctance to ruin puzzles meant that there was a real sense of accomplishment whenever you overcame a mental hurdle.

■ Interconnected side quests complement the main narrative brilliantly, offering plenty to do at any given time and granting great rewards for those willing to go beyond the call of duty.



23 GOLDENEYE 007 1997

■ Difficulty levels were made to matter for the first time, with harder versions of levels throwing in additional objectives that must be completed in order to finish the level.

■ Licensed games have always had a pretty ropey track record, with Rare's shooter arguably the one that showed us that they could be *great* rather than just awful or decent.

■ The first great multiplayer FPS on console, with unlockable characters, modes and options to keep the deathmatch fun going pretty much forever. Thanks, Steve Ellis.

21 GENRE-DEFINING GAMES

The N64 may have had a smaller library than Sony's PlayStation, but its releases were no less important. In fact, some were groundbreaking...

When Nintendo created the N64, it couldn't have foreseen the impact that some of its games would have going forward. While certain games were a testament of their time, bravely blazing trails that immediately affected their own generation, a certain few would go on to influence genres for many, many years to come. It's telling that some of the biggest games of the N64 are still influencing certain games today. In fact, here's just a few of them.

24 F-ZERO X 1998

■ Perfectly transitioned the series from Mode 7 magic to full 3D for the first time, with expert balancing of visual elements allowing it to do so without sacrificing a silky 60fps frame-rate.

■ One of the earliest examples of procedural generation in a racing game, with the X Cup allowing for near-endless replayability by creating courses on the fly.

■ A punishing difficulty curve made mastery of both handling and courses essential, going against the grain compared to a lot of other games on the console.

25 SUPER MARIO 64 1996

■ A masterclass in translating 2D gameplay elements to a 3D environment, pioneering techniques and systems that are still used in games to this day.

■ The castle hub offered a modern twist on the map-based structure of earlier games, with numerous tasks per stage and many a secret hidden among them.

■ New power-ups were perfectly pitched to show off the advantages of full 3D, the Wing Cap letting players soar above stages and the Metal Cap letting Mario venture deep underwater.

20-Year Anniversary

Drew picks...

STAR FOX 64

■ We were wowed by the SNES original, sure, but *Star Fox 64* took everything *Star Fox* did well and supercharged it, making it the definitive game in the series. Heck, it's so revered that it was remade for the 3DS and even the most recent game in the series, *Star Fox Zero*, took heavy inspiration from this N64 classic. It's brilliant!

THE BEST LICENSED GAMES

The N64 proved that a licence didn't have to be throwaway rubbish

STAR WARS EPISODE I: RACER 1999

■ The long-awaited first instalment of the *Star Wars* prequel trilogy disappointed cinema audiences, but we did get something excellent out of it in the form of this excellent racer. LucasArts managed to turn a single sequence in the film into a fully fleshed-out game, with multiple tracks across a variety of planets and all manner of alien racers. It was capable of competing against franchises like *F-Zero* and *WipEout*, which says everything you need to know.

TONY HAWK'S PRO SKATER 2000

■ While it might have originated over on the PlayStation, Activision's extreme sports series was also beloved by N64 fans. An excellent effort was made to squeeze everything onto a cartridge, even including the licensed soundtracks, and the score attack gameplay with secret-filled levels is a formula that works anywhere. *Tony Hawk's Pro Skater 3* became the very last N64 game when it was released in 2002.

WWF NO MERCY 2000

■ Wrestling was going through an incredible boom period during the N64's lifetime, spearheaded by stars like The Rock and Stone Cold Steve Austin – and this game was an awesome representation of everyone's favourite non-sport. As well as offering lots of customisation options and championship modes with branching paths that represented the storylines of the day, it had an awesome engine that even factored in weight advantages.

BEETLE ADVENTURE RACING 1999

■ Doing a racing game where all the cars are of a single model is a risky proposition, but *Beetle Adventure Racing* pulls it off in style. That's because the tracks are the stars, rather than the cars – there are secret routes to discover, items to find, crazy jumps and even dinosaurs looming out of the dense jungle. It's not the most well-known N64 racer, but you'd be crazy to pass up on *Beetle Adventure Racing* if you find a copy.

STEVE ELLIS

The creator of GoldenEye 007's stunning multiplayer gets misty-eyed

Why do you think Rare dominated on the system?

Rare's teams were in a fortunate situation where the management were able to shield them from the constraints that most other developers had to operate within. When you're breaking new ground, it's hard to do it according to a timetable and things usually take longer than you think that they will. Most of Rare's games were released later than originally intended because Rare's management were able to grant the extra time that they needed to allow them to become great. Other teams weren't so fortunate.

How does it feel know you created one of the N64's most defining games?

I feel lucky – in many ways it was an ideal time to get into the industry, just as it started to transition from 2D to 3D. New ground was being broken every day, and it was exciting to have the opportunity to be involved in a project where we had so many chances to push things forward and do things that hadn't really been done before. Almost two decades later it's great to look back and think, "I helped make that happen," and to see the steps that others have taken down the path that we were forging at that time.

When did you realise *GoldenEye 007* was going to be a big hit?

I remember discussing the sales potential with Chris Stamper as we approached release and the consensus within Rare's management was that we would sell between 2 million and 4 million units. The realisation that it might exceed those numbers came gradually. First we were sold out over Christmas 1997. Then we started to see weekly US rental charts, and week after week, *GoldenEye* was at number one. Then the awards started coming. It was probably only after that point that we really started to realise that the game was a hit – but even then, I didn't expect that anyone would still be talking about it after two decades!

How do you think *GoldenEye*'s multiplayer now stands up today?

To be honest, it's been a long time since I played it, and it's an interesting experience. While it's enjoyable to play for a while and remind myself of what made those games great, it's never something that I do for long periods. Games have moved on rapidly, and I soon find myself missing many of the developments that came later. I expect that playing *GoldenEye*'s multiplayer now would be a similar experience – it would be great to see some of the things that we did first, and maybe have a little fun along the way. But, yeah, I think I would soon start to miss the things that came later. I suspect that the aiming system would drive me mad, having gotten used to modern-day dual-analogue controls.

32 THE EASTERN GIANT

Q&A: STEVE MERRETT

The ex-Nintendo Magazine System journalist dons his nostalgia glasses

What did you like about the N64?
It was just classic Nintendo, really. A games console that made a leap in terms of processing power. Everything about it was geared towards the playing experience, with the addition of the analogue stick on the controller allowing for more precision of control, and it also opened up games in terms of scale while retaining the instant accessibility for which Nintendo were famed.

Was their much competition with other magazines?
There was, but it was mild compared to previous format wars – mainly because the N64 was where Nintendo started to lose third-parties. During the SNES era, everyone got on board and the result was a buffet of eclectic titles. The N64 saw a few fall by the wayside, so there was less to go around so competition for what there was higher. Also, with SNES titles we would often receive advance copies of everything as ROM boards, but there was no such system in place for the N64, which meant a lot of visits to publishers or them coming to us.

Why do you think Konami had such a strong presence on the system?
Konami, like Nintendo, was very gameplay-focused. It created games that were enjoyable to play, so the N64 was a good fit all round. The N64 was probably the last console where a lot of Japanese invention came to light, with the likes of *Rakugakids*, *International Superstar Soccer*, *Goemon* and *Castlevania* building upon elements that had gone before, but using the processing power to make them more involving to play. Nintendo and Konami seemed to share views on the purity of gameplay, and I think that is why their titles stand up today. That said, Konami released very few games for the system over here compared to their 16-bit output, so while their hits were successful, its output was less than 30 per cent of before.

» *Castlevania* made the jump to 3D with its N64 titles, the catch was that they weren't very good.

Konami added some variety to the N64

While it wasn't as prolific on the N64 as it had been in previous Nintendo consoles, the level of quality present in the majority of Konami's N64 output was still exactly what you'd have expected from the house of *Gradius* and *Contra*. Even though its focus was clearly on the PlayStation, Konami helped keep the cartridge dream alive with updates of some of its best franchises as well as some interesting original titles.

INTERNATIONAL SUPERSTAR SOCCER '98 1998

■ Back when there were more than two teams in the running for the footy title, Konami's greatest threat didn't come from EA, from Gremlin, or in fact from any other studio – its closest rival was arguably itself. The *ISS* games that came out on the N64 were different to their PlayStation counterparts, more arcade-like experiences with simpler controls and a faster pace than the PSone titles that was pushing towards realism as it evolved into *PES*. This accessible style was perfect for the N64, encouraging multiplayer matches anyone could pick up without sacrificing too much depth.

RAKUGAKIDS 1998

■ Wowed as many had been by *Super Mario 64* and the raft of 3D games that came early in the N64's life, the late Ninteties wasn't a forgiving time for 2D games. Fighters struggled, with Capcom and SNK struggling to break through the 3D hype and trying find a new angle for 2D brawlers. It's original titles like *Rakugakids* that exemplify this scene best. Employing 3D tech for its backgrounds with crisp, colourful characters dancing around in front of them, Konami's playful fighter ranks among the most family-friendly ever made and as adorable as it is, it's still technically proficient as well.

MYSTICAL NINJA 2 STARRING GOEMON 1998

■ A fusion of Edo period Japanese culture and modern luxuries, the *Mystical Ninja* series is played for laughs and even if some of the references may soar over the heads of a Western audience, there's no denying that the games are great fun. The first *Goemon* release on N64 got swept up in the 3D revolution, its open areas meaning that despite some awesome moments, much of the wacky magic of the franchise was lost. For the sequel, Konami returned to what the series did best, going back to 2D gameplay and tightening the focus to create a game more in keeping with *Goemon*'s heritage.

HYBRID HEAVEN 1999

■ Given that the N64 was light on both RPGs and beat-'em-ups, Konami must've expected that announcing a game that straddled both genres was to invite a certain degree of hype. As such, many were disappointed in the final game, but we'd argue that *Hybrid Heaven* lives up to its name. Player character and enemies face off in one-on-one battles in real time before the action goes turn-based when a strike or grapple is attempted. The RPG mechanics are really cool, too – limbs level up individually, while new abilities can be learned simply by seeing an enemy use certain techniques.

37 Nick picks...

SIN & PUNISHMENT: SUCCESSOR OF THE EARTH

■ If you need a reason to start collecting import Nintendo 64 games, *Sin & Punishment* might just be the very best one. The *Cabal*-style shoot-'em-up formula was taken to the extreme by Treasure, which added its signature boss fights and some of the very best visuals ever seen on the console.

38 THE POKÉMON CONNECTION

The N64 brought Pokémon to 3D in ways that we never would have imagined...

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39 POKÉMON SNAP

40 POKÉMON STADIUM

41 POKÉMON STADIUM 2

42 POKÉMON PUZZLE LEAGUE

The N64 was perfectly timed to ride the *Pocket Monsters* wave and sure enough, Nintendo made like a surfing Pikachu. Few would argue that the best thing to come out of this period of Pokémania was **Pokémon Snap**, perhaps the greatest deviation from the usual catch-'em-all template. After all, what kind of fan wouldn't want to go on a Pokémon safari, snapping pictures of all their favourite monsters along the way? While mechanically simple, the way it layers on additional tools keeps giving new reasons to head back to older courses, each time with a greater understanding of what to look out for and more ways to interact with the environment. It was basically the perfect use of the N64's power to offer a different kind of window onto the *Pokémon* world, while the *Stadium* games delivered a far more traditional experience.

Given that *Pokémon* was a big deal in Japan long before it even released in the rest of the world, it should come as little surprise that we were always playing catch-up. What we know as **Pokémon Stadium** was actually *Stadium 2* in Japan, the original game releasing much sooner and in an incredibly limited form – only 40-odd Pokémon actually had the animations necessary to be used in battle, the rest merely existing as models in a 3D Pokédex. Holding fire for the full-featured sequel turned out to be the right play and between its myriad modes and the ability to import your Game Boy team, it was a great companion to the core games. **Pokémon Stadium 2** built upon the formula and added support for *Gold And Silver* carts and the additional 100 monsters that came with them, as well as beefing out every aspect

of the game to provide trainers with a wealth of content… yes, including more wonderful mini-games for multiplayer fun.

On top of a slightly garish Pikachu-themed special edition console, there were also a few other Pokémon-flavoured curios for the N64. **Pokémon Puzzle League** was a basic yet entertaining match-three puzzle game with plenty to do to make up for its mechanical simplicity, while **Hey You, Pikachu!** was pure novelty value in cartridge form. By connecting special microphone adapter the controller, players could speak directly to Pikachu to get him to do… well, not a lot really. It never got European release, though if you do import it, be warned you'll need to put on your American accent if you want the little guy to even vaguely understand what you're saying.

PLAYING WITH POWER

Nintendo provided N64 owners with an important hardware upgrade

If there's one common thread that unites the consoles of the mid-Nineties, it's a need for more memory. Fitting everything into the available RAM was a problem for developers, and Nintendo had already planned to utilise a RAM expansion for the 64DD's planned multimedia applications. However, much like Sega had with the Saturn, Nintendo released it as a peripheral to improve its games. The Expansion Pak slotted into the front of the N64, replacing the pre-installed Jumper Pak, and effectively doubled its available memory.

What's worth applauding is the fact that Nintendo pulled off something that has been the downfall of many a platform holder in the past. The company managed to release a performance-enhancing upgrade without unnecessarily fracturing the console's user base.

43

44

TUROK 2: SEEDS OF EVIL

■ Acclaim developed this game on a 64DD development kit prior to the announcement of the Expansion Pak, and utilised the extra memory as an experiment. Seeing this running in a 640x480 high resolution mode at E3 in 1998 was the prompt that caused Nintendo to release the expansion.

45

DONKEY KONG 64

■ The king of collect-a-thon 3D platform games was the first N64 game to require the Expansion Pak as standard, solely because of a bug in the non-expanded code. The game had to ship with the peripheral as a result, at a major cost to Nintendo. Whoops!

46

HYDRO THUNDER

■ While Nintendo's Expansion Pak was often used to up the resolution of numerous N64 games, it enhanced games in other ways, too. While titles like *Perfect Dark* wouldn't work without it, *Hydro Thunder* benefitted by letting four players race at the same time.

47

THE LEGEND OF ZELDA: MAJORA'S MASK

■ How do you top one of the best games ever? Well, if you're Nintendo you totally change the design, and then give it a nice big graphical upgrade to boot. As compared to *Ocarina Of Time*, *Majora's Mask* features improved draw distance, better effects and ful-3D building interiors.

48

STARCRAFT 64

■ Most Expansion Pak games reward you with improved visuals or expanded multiplayer support, but Blizzard's real-time strategy conversion went one step further – the additional *Brood War* missions were only available if your N64 had the Expansion Pak installed.

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A NAME OF QUALITY

Midway was one of the few publishers at the time that took a shine to Nintendo's 64-bit console

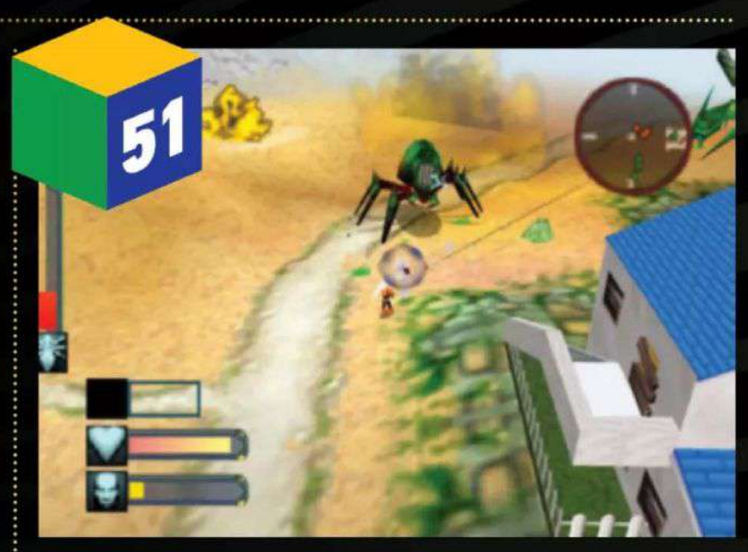
Once a major player in the development space, this was the era that saw Midway really turn its attention to publishing – while arcade development and ports continued, much of the company's work would be in licensing, marketing and publishing other titles for release. Those in charge really had a good head for it too, with Midway picking up some huge licences to sit alongside its own arcade ports. In fact, we'd argue that Midway's supplimentary output was even better than its first-party stuff on N64, as these wonderful things help to prove.

49

50

DOOM 64 1997

■ Developed by Midway itself under supervision from id, this 'port' (of sorts) of the FPS classic is unique in that it uses redrawn assets for enemies and weapons that you won't see in any other version – monsters, while familiar, have a different look, most weapons have new effects and looks but most notably of all, it's a dark, gory game on a Nintendo platform, something that had been avoided during the previous generation. Timing wasn't on its side, however – launching with no vertical camera movement and no split-screen multiplayer mere months ahead of *GoldenEye* meant that even the granddaddy of the genre was no match for good ol' Bond.



51

BODY HARVEST 1998

■ Often seen as a progenitor to the *Grand Theft Auto* series, DMA Design hit an early hurdle when Nintendo, originally meant to be the game's publisher, it delayed and eventually dropped *Body Harvest* from its proposed launch window slot and left DMA looking for a new publisher. Gremlin picked it up in Europe, but Midway was the one to deliver the game to the US. Featuring five time-spanning sandboxes filled with vehicles to pilot, aliens to mow down and tasks to complete all while keeping collateral damage as low as possible, it was a showcase of the new gameplay possibilities presented by more powerful hardware.

52

READY 2 RUMBLE BOXING 1999

■ While most fondly remembered by those who picked it up with their Dreamcasts, *Ready 2 Rumble* was treated to some decent ports by Midway and while it didn't quite look the part, the arcade-inspired gameplay made the jump to other systems more or less intact. Simple controls hide a surprising amount of depth, with skilled players able to parry or weave around blows to land their own counters – find face with fist enough times and you'll fill your Rumble gauge, allowing your boxer to enter a powered-up state and unleash a devastating barrage.

53

MICRO MACHINES 64 TURBO 1999

■ No publisher as prolific as Midway can boast a faultless slate, but it hardly seems worth getting bent out of shape over such inevitabilities when discussing the publisher that did a public service and picked up *Micro Machines* for release on the N64. *Turbo* is a port of *Micro Machines V3*, it's not quite up to the standard of the 16-bit versions but it is arguably as close as the series ever came to recapturing that magic. A 'Turbo' setting allowed for the pace of the action to be altered a la *Street Fighter II*'s ports, allowing for either high-speed madness or more tactical showdowns between pros.

WIL OVERTON

The industry veteran revisits the mid-to-late Nineties

What did you like about the N64?
I liked that it gave us all the Nintendo classics and, in nearly all cases, managed to successfully transfer them into the third dimension in real style. From *Super Mario* to *Star Fox* to *Mario Kart* to Zelda each N64 iteration of a famous series pretty much defined what that game would be like for a fair few installments to come.

I also liked the weird controller that really looked like it shouldn't have worked, but (I thought) managed to be really comfortable and easy to use.

Finally, I liked that it had the aesthetics of an old Fifties radiogram. That logo panel really should have glowed when it was on.

How did it compare in power to the PlayStation?
I couldn't begin to tell you if it was, technically, a more powerful system and maybe the lack of space on a cartridge, curtailing impressive prerendered cutscenes, sometimes made it seem like it didn't have the same welly under the hood but when the games shone it was more than a match for an equivalent title on the PlayStation.

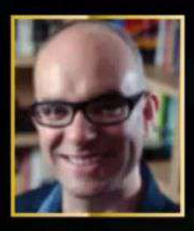
Who do you think were the best developers for the system and why?
Apart from Nintendo themselves, Rare were the undoubted stars of the N64. Although you could argue that games like *Banjo-Kazooie* and *Diddy Kong Racing* simply expanded on existing Nintendo successes I think they more than proved their worth with more original fare like *Blast Corps*, *Jet Force Gemini*, *GoldenEye* and *Perfect Dark*. Strangely, all the Japanese names that we had championed so much on the SNES were suddenly far more quiet and offerings from the likes of Konami and Capcom seemed few and far between so maybe that allowed Western developers to stand out even more.

What's the most impressive game you've played on the system and why?
It'd be easy to say something like *Ocarina Of Time* (and yes, that did all blow our minds a little at the time) but I remember being the most impressed when we first booted up *F-Zero X*. In a time when racing games seemed more like time trials where you seldom saw another competitor to be suddenly faced with 30 racers all jostling for position was truly something. Others may champion the GameCube's follow-up - *F-Zero GX*, but *F-Zero X* still remains my favourite racer and N64 game overall.

Why do you think the system remains so popular?
A dose of Nintendo and Rare classics more than make up for a lacklustre showing from other developers. There are probably whole swathes of fans for whom the memory of four-player *GoldenEye* is the only one necessary to cement the N64 as a firm favourite.

NIEL BUSHNELL

The talented artist and animator steps out from the shadows



How did you come to be involved with *Shadow Man*?
I was working in 2D traditional animation in London and looking to move back to my native northeast. I'd heard of Iguana and got in touch. They were keen to grow their animation team and offered to train me to use 3D software, so within a few weeks I was working on *Shadow Man* animating in-game characters and cutscenes. I came on board in the last eight months of the project so most of the design work was in place. I didn't know at the time but coming onto a game in the last six months of development is probably the worst time to join – lots of late nights and working weekends for free, but the team was great.

Was there more creative input from the licence owners?
I wasn't aware of that side of things.

***Shadow Man* received an insane amount of press coverage. Why do you think this was?**
I think this had a lot to do with Guy Miller and Simon Phipps. They were often talking to journalists, bringing them up to look around the studio. They came up with a story about a member of the team who had burned themselves out because of the horror content of the game and had to go away for a long lie down in a medical facility. They managed to create a real buzz around the game.

What was it like working on such an adult-themed game. Did Nintendo have concerns?
I don't recall any issues from Nintendo, we just made the game that felt right. And a lot of it was suggestive horror – lots of things happening in darkness combined with Tim Haywood's soundscape.

What were the hardest things to balance from a technical point of view?
The technical restrictions were a day-to-day problem. The characters had such a low poly count and all of the animation data went through a really harsh compression process where the non-linear information was stripped out. We'd create nice-looking fluid animations that would look clunky in game. It was an exercise in problem-solving, we were always looking for workarounds to fix the issues created by the implementation process. The other big issue was time. When I came on board none of the cutscenes had been animated and there was immense pressure to get them done. Most of them were very wordy and long. We had days to animate what should have taken weeks. The camera in the cutscenes was also a big issue. Instead of having multiple cameras, one for each angle, we could only use one camera throughout, which meant animating it popping over a single frame to the next starting point. Billy Allison came up with a nice script to help with this but it still meant the cameras in the cutscenes were very clunky.

CRITICAL ACCLAIM

Always the King Of Controversy, Acclaim was the third-party studio that frequently stole first place

Acclaim was a strong supporter of the N64 throughout its lifetime – not only did it provide a number of exclusives, it was always keen to make use of hardware enhancements like the Controller Pak and Expansion Pak. More importantly, it was an ally that helped to prove that Nintendo wasn't just about family-friendly entertainment, and could offer something to appeal to older demographics. Here are four of the most important games that it brought over to the system…

TUROK: DINOSAUR HUNTER 1997

■ Acclaim bought the rights to the comic series to make this game happen, and boy was it ever worth it. *Turok* was a fantastic example of what could be done with the N64 hardware, delivering smooth movement rarely seen in first-person shooters on console. People credit *GoldenEye 007* with proving that consoles could do first-person shooting well, but that's doing a disservice to this game. It was one of the first third-party games out for the system in Europe, and despite an eye-watering price tag it sold an astonishing 1.5 million copies, becoming a key early hit for the machine.

EXTREME-G 2 1998

■ It takes a lot for a futuristic racing series to stand out when it shares a platform with a titan such as *F-Zero X*, but Acclaim's *Extreme-G* series managed to do so. This excellent game combines racing on super-fast bikes with shoot-'em-up gameplay, allowing players to dish out punishment as they speed around courses that feature all manner of jumps, loops and other fun features. As well as improved visuals, this instalment boasts better multiplayer thanks to a cool tournament mode, as well as a combat-oriented Battle Arena mode for when you're tired of straight racing action.

SOUTH PARK 1998

■ Matt Stone and Trey Parker's cartoon series has been popular for a long time now, but in 1998 it was the hot property on TV – and if you've forgotten how big it was, it's probably worth remembering that *Chocolate Salty Balls* was a number one single that year. Acclaim's first-person shooter adaptation wasn't the hottest game ever, but it was a serviceable effort that proved to be a big Nintendo exclusive that Christmas. What's more, it was *far* better than the awful PlayStation conversion that followed the next year, which was always fun to crow about.

SHADOW MAN 1999

■ This is one of the darker N64 games out there, and it's another one of Acclaim's comic book acquisitions. Michael LeRoi is a voodoo warrior, bonded to the Mask Of Shadows by the mysterious priestess Mama Nettie, whose role in life is to protect living beings from the threats that lurk in Deadside. It's one of the most polished action-adventure games on the platform, and one which signifies Nintendo's more open attitude to content on its consoles – you'd never have seen a NES game dealing with the occult and serial killers this way, never mind all the swearing.

Darran picks...

GLOVER 1998

■ There are plenty of hidden classics on the N64, but this one is easily my favourite and highlights just how inventive the platform genre could be. The aim of each stage is to use Glover to guide a ball to the level's exit. In addition to running around independently, Glover can punch blocks to break them, guide, throw or bounce his ball and even transform it into different types, each with their own unique abilities. While it appeared on both PC and PlayStation systems, the Nintendo 64 version is clearly superior and even today it holds up incredibly well.

PHILIP OLIVER

The mini-Making Of Glover

Where did *Glover*'s concept originate?
The inspiration came from us trying to create a game based inside a crazy golf course, or adventure golf as they call it in America – actually it was more specifically 'Pirates Cove' in Orlando. We'd visited a few years before on a Summer holiday to Disney World with our parents.

What was the biggest challenge from a technical point of view?
Glover was our first game with full-3D characters with internal rigged skeletons. The graphic engine was build internally from scratch, as was the landscape editor. Characters and backgrounds were modelled in 3D Max and were very low – all coming in at under 100 polygons! Glover, from memory was around 80, although he did have four limbs!

What was the hardest thing to achieve from a gameplay point of view?
The gameplay was unique; there were very few 3D games, and certainly none that tried to tackle guiding a ball around a world. It took a few months to get gameplay that was actually easy and fun to play. It was essentially the first level of *Glover*...

Where did the idea of using different balls originate?
The ability for the ball to change to other size balls with different properties just seemed like a natural fit. Videogames always gave opportunities at which the main character could change his attributes.

Is the Crystal Kingdom featured in the game connected to *Dizzy* in any way?
Only that the concepts in both cases were from the Oliver Twins. *Crystal Kingdom Dizzy* was actually developed by a team at Codemasters and *Glover* was a team at Interactive Studios a few years later. Andrew Oliver was the lead programmer on *Glover*.

Why was the N64 version vastly better than the PlayStation offering?
Glover was designed to exploit the power of the N64's 64-bit floating maths hardware. Therefore maths were a key part of the game. Hasbro asked us to convert it to the PlayStation for the following Christmas (1999). It was tough converting everything to fixed-point maths and rebuilding the levels with more polygons. It took almost a year to do.

20-Year Anniversary

N64'S LEGACY

Great games that wouldn't be here without the N64

The N64 had some fantastic games available for it, but not all of them saw the light of day. Many potentially great games were revealed for the system, but they either fell by the wayside due to publishers and developers losing faith in the console, or realising that the hardware simply didn't have the power to realise their visions. As a result a great many games were either canned outright, or moved across to the GameCube. Here are a few that did make the jump.

STAR FOX ADVENTURES 2002

■ Originally known as *Dinosaur Planet*, this was started shortly after *Diddy Kong Racing*. Rare planned it as its last N64 game, but Nintendo had other ideas, asking Rare to retool the game as a new *Star Fox* title for its new GameCube console. It ended up being Rare's last official Nintendo game.

RESIDENT EVIL 0 2002

■ Capcom planned its *Resi* prequel as a 64DD release, but changed its mind after seeing how poorly the system was received. It moved to the N64, and received a demo in 2000 at TGS. When Capcom realised its game wouldn't fit on a single cartridge it moved across to Nintendo's GameCube.

CUBIVORE: SURVIVAL OF THE FITTEST 2002

■ This was another game that was slated for the Nintendo 64DD. It was first announced in 2000, but its developers soon changed its mind about continuing work on the N64 and it switched development over to the GameCube. Unlike every other game mentioned here, its N64 roots are still very clear to see.

ETERNAL DARKNESS 2002

■ Silicon Knights first revealed *Eternal Darkness* as a N64 game during 1999's E3. Originally planned for a October release the following year, it was eventually moved across to Nintendo's new console, where it received further delays due to the September 11 attack in 2001. It was eventually released to critical acclaim the following year.

Snowboard Kids
NINTENDO 64
Nintendo

NINTENDO64

THE SUCCESS OF THE NES AND SUPER NINTENDO CEMENTED NINTENDO'S POSITION AS THE INDUSTRY'S LEADING CONSOLE PUBLISHER. FUELLED BY ITS OLD DOMINANCE, NINTENDO ATTEMPTED TO CONTINUE ITS STRANGLEHOLD ON THE MARKET, BUT STIFF COMPETITION FROM SONY'S PLAYSTATION MEANT THE TIDE WAS ABOUT TO TURN...

Many gamers are convinced that Nintendo's 64-bit console was a complete failure for the company - those gamers are wrong. While it is hard to deny that there were a number of factors that resulted in Nintendo being dethroned by Sony by the time the N64 was phased out. The innocent victim in all this was the console itself; it was a great machine with some unbelievable games, but it was hamstrung by certain corporate decisions and never really fulfilled its potential. However it was not the flop many others label it as either.

Project Reality was first hinted at as far back as 1993, the name coined from Nintendo's new relationship with Silicon Graphics and its workstations being used to great effect in films such as *Terminator 2* and *Jurassic Park*. The following year saw the arcade machines *Killer Instinct* and *Cruis'n USA* released that were touted as using the same technology that would soon be available in your own home. In hindsight, the arcade machines were vastly overpowered by comparison, but no one was to know that and anticipation surrounding Nintendo's next console grew.

It wasn't until November 1995 that the new console, dubbed the Ultra 64, was finally unveiled at the annual Shoshinkai exhibition to great expectation. Only two of the 11 games shown were playable; one was *Kirby Bowl*, which would disappear into development hell shortly afterwards. The other was *Super Mario 64*. The playable demos available were all that was needed to convince the attendees that Nintendo still had the magic.

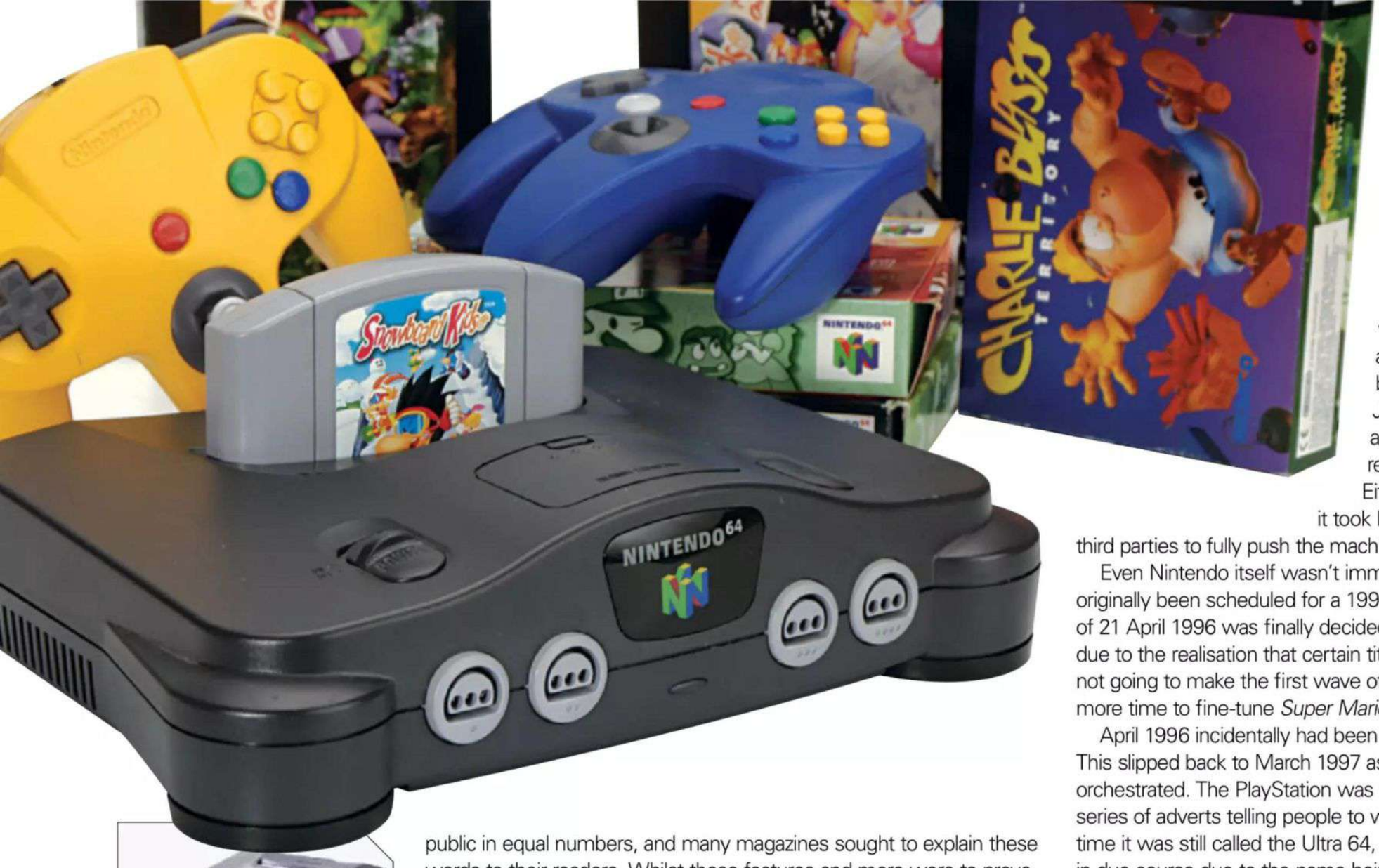
Part of that was due to the design of the controller. Nintendo is known for producing ergonomic devices that are focused on getting the best out of its own games, and for the N64 this was no different. Designed by Genyo Takeda, the controller had three prongs, offering three different holding positions and hence the possibility of varying control schemes all wrapped up in one unit. Sitting on the middle prong was an analogue stick, a device unfamiliar to many people at the time. This design choice was about to change the way videogames were made forever.

The controller was better than that of the competition, but it took time to learn how to use it. The same could be said for the console itself. When announced, terms such as "Z-buffering", "tri-linear mip-mapping" and "Gouraud shading" both wowed and confused the

New... or old?

Many groundbreaking features of the N64 touted by Nintendo were not as new as first thought. The N64 itself was labelled the first 64-bit console, though technically the Atari Jaguar had already gotten there first with its object processor. It was not the first console either with four controller ports as the Bally Astrocade and Atari 5200 had this feature in the pre-crash era. And that analogue stick sitting prominently in the middle of the controller? Many people believe Sega had pre-empted Nintendo's decision with its release of *NiGHTS* (bundled with such a controller), but the game was released in Japan two weeks after the N64 launched. Nonetheless both the Atari 5200 and Vectrex had an analogue stick as standard. What can be said for sure is that the inclusion of this feature has influenced the design of all future controllers since.

> "THE PLAYABLE DEMOS AVAILABLE WERE ALL THAT WAS NEEDED TO CONVINCE THE ATTENDEES THAT NINTENDO STILL HAD THE MAGIC"



64 Didn't Deliver

The 64DD unit, or Dynamic Drive, was Nintendo's attempt at a proprietary media format that could rival the capacity and flexibility of the CD used by Sony's PlayStation. First previewed in 1995 before the N64 had even launched, it was delayed beyond recognition and when it finally did arrive in 1999, had lost all the momentum and impetus that it promised.

Not only were games being designed to run from the unit directly, but many companies were planning upgrade disks that could be accessed by the cartridge version to add new features, missions and content to the main game. With the delays, all bar one of these was cancelled; the one survivor, the *F-Zero X* Expansion Kit, happened to be almost worth buying the unit for regardless.

During its one-year lifespan only nine pieces of software were released for the unit, and in conclusion can be considered the only Nintendo hardware failure alongside the Virtual Boy.

public in equal numbers, and many magazines sought to explain these words to their readers. Whilst these features and more were to prove the power of the N64 was greater than that of the PlayStation, they also provided one or two serious end-user flaws.

The largest complaint levelled against the N64 is how quite often, the graphics appear as if someone has smeared Vaseline across the screen. This blurry appraisal was in contrast to the often jagged and pixelated look on the PlayStation; the N64's mip-map and anti-aliasing techniques helped smooth out textures when they moved closer or further from view, but the restrictions on storage with cartridges and a very low texture cache meant these textures were often blurry as a result. Nintendo itself often chose to use the Gouraud shading to compensate for the lack of texture definition.

> "AT THAT POINT, SUPER MARIO 64 HAD BEEN SOLD WITH ALMOST EVERY CONSOLE"

Clever tricks to get around some of the limitations, together with rewriting parts of the graphics processor microcode meant that the true power of the N64 could shine through. Developers such as Factor 5 and Rare were especially adept at getting the most from the machine. In conclusion, like most other consoles, those developers willing to put the effort into learning got the most from it, as witnessed in the end result of the games they released.

As early as 1994, Nintendo had started to assemble a group of programming teams that would be responsible for producing some of the early N64 games, that would inevitably give them a head start in getting the best from it. Aside from Williams and Rare who produced the previously mentioned coin-ops, others courted included simulation specialists Paradigm, Acclaim, Sierra, Lucasarts, and Electronic Arts. Notice anything about the companies listed? None of them were Japanese. A costly oversight at the time? Maybe so looking back. Perhaps Nintendo believed Japanese companies would automatically come on board. The reality was to prove a lot different. Either way, even with the head start, it took longer than expected for any of the third parties to fully push the machine.

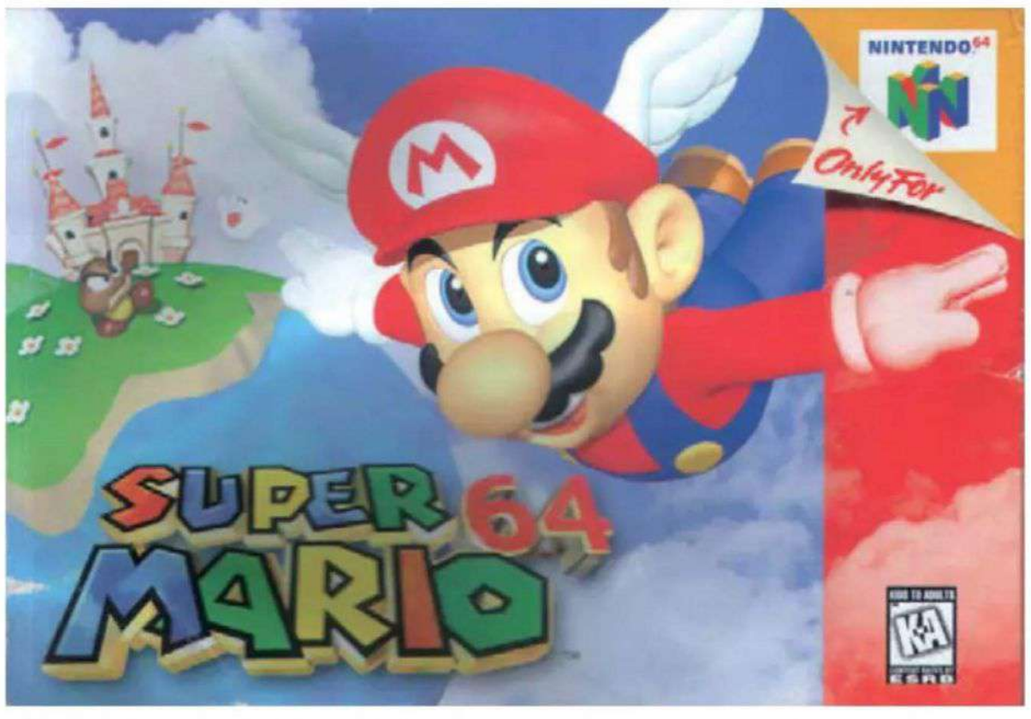
Even Nintendo itself wasn't immune to running late. The N64 had originally been scheduled for a 1995 release, and when a definite date of 21 April 1996 was finally decided upon, it shifted two more months due to the realisation that certain titles, such as *Mario Kart 64*, were not going to make the first wave of releases, and Miyamoto wanting more time to fine-tune *Super Mario 64*.

April 1996 incidentally had been the planned launch date in the UK. This slipped back to March 1997 as the US release was planned and orchestrated. The PlayStation was already out and Nintendo UK ran a series of adverts telling people to wait for the arrival of the N64. At the time it was still called the Ultra 64, the "Ultra" part apparently dropped in due course due to the name being owned by Konami.

When the console did launch in Japan, the PlayStation had already been on sale there for 18 months. The launch games were similar to that of its predecessor, the Super Famicom, in that it involved a *Mario* title and a *Pilotwings* game. The other title available that day was a version of *Shogi*, a game very much Japan-centric in nature.

And that was it. Until the release date of the console in the US was approaching, there was no other software released in Japan, which was somewhat worrying from a promotions and publicity point of view. *Super Mario 64* may have been an epic, brilliant, groundbreaking title, but if people wanted something else to try on their new system, they were a little stuck, to the say the least. Not that Nintendo had much to worry about the success of the console at that point; *Super Mario 64* had been sold with almost every console, and by the end of the N64's lifespan, had shifted more than ten million copies, making it the most successful N64 game ever.

With the launch of the console in September in the US coming up, Sony raised the competition stakes slightly by dropping the price, a common tactic, of the PlayStation to under $200. However Nintendo seemed to panic, and in response dropped the price of the N64 pre-launch by 50 dollars from its original proposed price of $249.99. The same could not be said of the console launch in the UK; Nintendo resolutely stuck to its price of £249.99, which at the time made it 60 per cent more expensive than it could be bought for in the US.



» What a lot of people bought a N64 for in the first place.

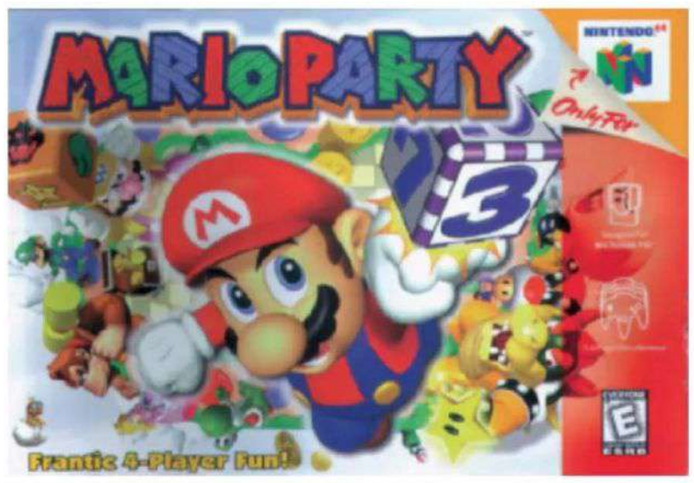
you can't buy this.
About to buy a new games machine?
Is it worth waiting?
Yes.
32 bit CD machines are fine, but they don't cut it where it really counts.
They just don't have the power.
This does. 64 bit power. Nintendo Ultra 64.
The speed of silicon cartridge.
Not CD s = l + o = w.
You can't buy it yet.
After all, nothing this good comes easy.
But do you really want something less powerful?
WAIT FOR IT...
Nintendo
NINTENDO ULTRA 64

» Nintendo ads tried to persuade people not to buy a PlayStation.

» Guns, girls, gigantic set-pieces, what more could you want?

» A new entry in the series gained a whole new set of fans, but many SNES fans were disappointed by comparison with the game.

» Worthy of purchase merely for the Katina level, but brilliant overall in all respects.



» Take the simple board game concept, throw in a whole load of mini-games into the mix and Nintendo's characters, and the result is an entertaining party game. Which has since been milked to death.

» Originally conceived as a powerboat racer, once it turned into a jetski simulation it gained a more personal quality with the controls being perfect and the wave simulation incredibly accurate.

Realising its folly soon after, the price was dropped 100 pounds a few months after launch, heralding scores of furious complaints from early adopters. Nintendo attempted to placate them with vouchers covering the difference, which was mildly received. It wasn't the only reason why being a PAL N64 owner at the time was the equivalent of getting a sharp stick repeatedly up the backside, for reasons that will be touched on later.

What can't be denied is the quality of some of Nintendo's own games. Examples of its great games include: *Starfox64* with its marauding levels, challenge, addictiveness and the sheer film inspiration of the Katina level; *Waverace 64* with its superb water physics and bouncy gameplay; *F-Zero X* for taking the original, giving it a serious rocket from behind and a real heavy metal soundtrack to boot; *Pilotwings 64* for being so wonderful to play.

Three new series also made their debut on the N64, all becoming instant hits. *Super Smash Bros* was Nintendo's answer to the *Power Stone* genre of multi-player fighter, but with the spark of HAL Labs at the helm, made it a unique creation of backstabbing brilliance. *Paper Mario* meanwhile was a different take on the turn-based RPG concept with plenty of nuances and invention to back up the gameplay. Finally *Mario Party* combined board games with mini-games and the chance to wreck your analogue stick in the process.

And then there are the *Zelda* games. *Ocarina Of Time* was constantly delayed but proved to be a tour de force of concept, idea and execution that has justified it to be labelled repeatedly as the best game ever. *Majora's Mask* on the other hand has been unfairly overlooked by comparison, which is a shame because in some ways, it even trumps *Ocarina*. The relationships and bonds formed within the three days left before the moon strikes are some of the strongest ever produced from a game, and it really hits home when you realise just what the ending actually means.

Nintendo had its own popular games, the powerful hardware, and the new controller. There was just one piece missing from the equation: third-party support. Why was third-party support so lacking on the N64 compared to their two previous consoles? One of the main reasons lies in the choice of remaining with a cartridge media format instead of using optical as Sega and Sony had.

Not that cartridges didn't still have advantages: they were more robust than CDs, less likely to be damaged via general use; they could hold save data via design instead of making the user buy memory cards; and loading times were non-existent compared to CD, which a generation of gamers, unfamiliar with loading tapes into 8-bit machines, were about to discover anew. Loading times disrupted the flow of playing a game, something that Nintendo were keen to avoid.

> "THERE WAS JUST ONE PIECE THAT WAS MISSING FROM THE EQUATION: THIRD-PARTY SUPPORT. WHY WAS THIRD-PARTY SUPPORT SO LACKING ON THE N64 COMPARED TO ITS TWO PREVIOUS CONSOLES?"

However, there was one over-riding link connecting all these features: they benefited the end user and not the publisher. Cartridges were expensive to manufacture, and as Nintendo still controlled their production, it profited directly from every one made. Cartridges were also harder to pirate, which is likely to be another reason for sticking with that format. They also held far less data than CDs could, so publishers were in effect being asked to support a console that had a far higher space-to-cost ratio than, say, the PlayStation.

Then there were the licensing fees. Sony had been smarting for years over Nintendo's betrayal regarding the proposed CD peripheral for the SNES. Not wanting to cancel the project outright, Sony decided to continue research and build around what it had already created, with the end result being the PlayStation console we know today. Sensing an opportunity, Sony organised its licence fee structure (the money publishers have to pay to be allowed to release their games on a machine) on a much lower scale to Nintendo.

When you look at everything together, the cost of manufacture, the cost of licensing, the difficulty in getting the best out of the console, it isn't hard to see why third-party publishers made a beeline for the PlayStation compared to the N64. It was far cheaper and easier for them to publish videogames all of a sudden. Their decision was made by the actions of both manufacturers. Edge magazine even predicted many of these factors in an article soon after the N64 launch. This situation was further escalated by the choice made by a certain Japanese company with a certain RPG.

NINTENDO 64

"THE N64 IS PROBABLY WHERE THE ADAGE 'YOU BUY A NINTENDO MACHINE FOR NINTENDO'S GAMES' BEGAN"

» **Above:** Bangaioh: the original, and some would say, better version of the panic-inducing shooter fest.

Software availability from certain publishers and of certain established series is a key factor today towards a console's success. In hindsight it did not matter that the N64 probably had a far better good-to-bad ratio of games in its library; it was the sheer volume of releases at a cheaper price for the PlayStation plus the presence of certain key games that tipped the balance.

Looking at the major third-party publishers during the Nineties, there were wide differences in their output between the N64 and the PlayStation. Capcom and Namco managed a whole three releases each for the N64: a shockingly low level of support. Konami by comparison released 20 or so games, which seems pretty impressive, until compared to the more than 50 released for the PlayStation. Even the king of third parties, Electronic Arts, only managed a similar number of releases.

The biggest blow to Nintendo's fortunes was the loss of Square. Towards the end of 1995, several screenshots were published which were purportedly taken from the next *Final Fantasy* game. That's how the journalism went. In fact they were from a technical demo Square had written to test various three dimensional techniques. Unfortunately no one knew this at the time and huge anticipation built when it was assumed Square were on board and were writing the next *Final Fantasy* game for a Nintendo machine, just like it had for the previous six.

When Square announced in January 1996 they were instead going to be publishing *FFVII* on Sony's PlayStation, the collective jaws of Nintendo fans dropped. As it turns out, Square had never planned on publishing *FFVII* on the N64. Early on in development it was decided that the requirements of the game needed a much larger media capacity than cartridge allowed. Square's decision in hindsight was elegantly simple to make, but it didn't stop the accusations against Sony that it had "tied up" Square in a deal to take it away from Nintendo. Square had dealt the N64 a massive blow before it had even been launched.

With *FFVII* scheduled to be released on the PlayStation, other publishers knew that the console would sell in droves just so people could play the game, and this in turn gave them more confidence and knowledge that there would be lots more potential buyers for their games if they also released on the PlayStation. In a way, it was a self-fulfilling circle of cause and effect. Sony also marketed its console towards a different audience from the norm, complete with advert saturation; by comparison promotion for the N64 seemed quite small. Nintendo arrogantly assumed people would automatically go to buy its console regardless, which they did, but more people were flocking to the PlayStation for the games it offered and the "wow" factor that FMV provided via the new CD medium.

With a narrower selection of parties publishing on the N64, it meant that certain genres were neglected, which affected sales levels. For example, role-playing games are huge business in Japan and there are hardly any available for the N64. Likewise fighting games. By comparison the range of sports games available for American fans was sufficiently large to keep them happy. In fact, the US is what really kept the console alive, as it accounted for two-thirds of the worldwide sales, and it managed to sell half of what the PlayStation achieved in that region.

The N64 is probably where the adage 'you buy a Nintendo machine for Nintendo's games' began. Given the magnitude of many, they were worth the entry fee alone and anything else was a bonus. Of the developers who did write for the N64, one stands out above all others: Rare. Having wowed games players with their SNES releases, it was about to pull even bigger rabbits out of an even bigger hat. Put simply, you can't underestimate just how important Rare's games ended up being towards the success of the N64.

From the regal beauty and genius of the *Banjo-Kazooie* games, the addictiveness of *Diddy Kong Racing*, to the offbeat destructive nature of *Blast Corps*, and the frantic bug blast of *Jet Force Gemini*, Rare games were held in vast esteem and rivalled the releases of Nintendo itself. Indeed in some ways, *Banjo-Kazooie* and *Diddy Kong Racing* supersede the games they were based upon. Sitting right at the top of the tree however is *GoldenEye*, which was a tour de force of programming, showing that consoles could do the FPS genre and give gamers a multi-player experience that was incredibly hard to let

» This is the gaming equivalent of having your brain sucked out through your eyes. Explosively quick, superbly playable and playing a full-on heavy metal soundtrack.

» What might have been if Square had decided to remain with Nintendo.

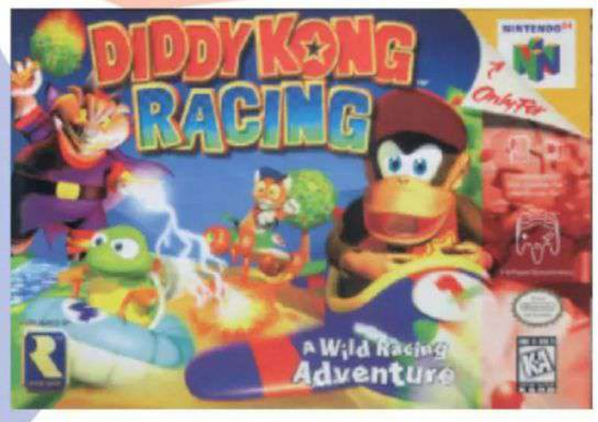
» If you haven't heard of *The Ocarina of Time*, there's not much hope for you. Simple, sublime, beautifully brilliant.

» As a game *Majora's Mask* wasn't as epic as *Ocarina*, but it somehow created even more emotion and atmosphere than its predecessor.

» Football (or soccer) may not be that huge in the US, but they received all three N64 *ISS* games with region-specific artwork and design. The game still played brilliantly as always.

» Bear, bird and big-eyed characters. It's bound to be another Rare classic.

» *Sin & Punishment* was an incredible offering from Treasure and is one of the best Japanese exclusives you can buy.



» Rare's *Diddy Kong Racing* had a single player mode that was far more entertaining than what was featured in *Mario Kart 64*. The multiplayer was pretty good as well…

» Bugs and blasters ahoy as Rare do the third-person shooter fest in another example of how to get the most from the N64 hardware.

» The ambitious sequel to *Goldeneye*, that delivered in spades but was just perhaps a little too demanding on the hardware.

go. It is rightly heralded as not only one of the best N64 games, but one of the greatest of all time. Not bad for a team where many of the developers were doing their first ever game.

Of the major third-party publishers, Konami was probably the most prolific and consistent in its support of the N64, with versions of *Castlevania*, *Goemon* and *ISS* appearing on the machine amongst others; *ISS98* especially should be singled out for praise as being the best console football game available until the *Winning Eleven* series started to become known in the West. Konami's sports game contribution was large in general, probably helping the console's performance in the US.

Other developers were just as notable on the N64 even though their releases weren't quite as prolific as Konami. Left Field programmed a couple of good basketball games, licensed with Kobe Bryant, and the excellent *Excitebike*. Camelot transferred its superb golf series across to make *Mario Golf*, and then went on to produce the equally good *Mario Tennis*. Factor 5 produced two *Star Wars* games that almost pushed the N64 to its limit, and then went further and programmed the did-not-think-it-possible *Indiana Jones* and the Infernal Machine. Special word of course must go to the doyen of development, Treasure, which managed to produce its usual wizardry in creating three masterpieces of mayhem, namely *Mischief Makers*, *Bangai-o* and *Sin & Punishment*. All three are well worth finding and buying purely for their unbridled quality.

Towards the end of the N64's life, Nintendo belatedly released the 64DD unit in Japan (see boxout) and a 4Mb RAM expansion pack designed to double the available memory of the console and allow more demanding titles to be written. Only a few games in the end actually needed it (though many benefited from its presence) but these include *Majora's Mask* and *Perfect Dark*, two of the classics. By the end of 2001, the N64 was all but dead with the release of the GameCube, though *Tony Hawk's Pro Skater 3* did make it out in the US in August 2002.

If you missed out on all the N64 fun back then, now is a great time to get into the machine. There is just one consideration though when choosing to buy: do not get a PAL machine. Not only can it not be modded for RGB, but many PAL games suffer from no optimisation at all, meaning those large black borders and much slower speeds also experienced with the SNES. By comparison, buying the US version is probably the way to go, as it can play Japanese games with the removal of the tabs inside the slot and it had available just about everything released in Europe and much more. The N64 is currently something of a cult machine, with a dedicated band of supporters who are gradually winning over people who dismissed it at the time.

> "ANY CONSOLE THAT SELLS OVER 30 MILLION UNITS WITH MANY TRULY GREAT GAMES CANNOT RATIONALLY BE CALLED A FAILURE"

In fact, many people consider the N64 to be a failure, especially when compared to the performance of the PlayStation, which has to date sold more than 100 million units. However any console that sells over 30 million units worldwide and has many games present in the bestselling and greatest ever games lists cannot rationally be called a failure. Nintendo revolutionised three-dimensional gaming and controllers via the N64, and it has an abundance of classics waiting to be discovered if you haven't done so already.

SPECIAL THANKS TO Lost Levels for the image of N64 *Final Fantasy VII*.

iQue Test

China has always been one territory that console manufacturers traditionally steer clear of due to the rampant piracy present within the country. Nintendo decided to try to break into the market with the creation of the iQue Player, released towards the end of 2003. On the outside it looks like the offspring of the N64 and Dreamcast controllers, but inside it uses console-on-a-chip technology to provide an N64 playing experience.

Games are stored on a 64Mb flash card contained within a cartridge that slotted into the device, which connected directly to the TV in a similar way to all those pirate rip-offs you see being sold on street markets. The games were available from an 'iQue depot' where they could be downloaded onto the cartridge. The unit was successful enough that Nintendo has released other versions of its more recent hardware in China to similar effect.

PERFECT TEN GAMES

GOLDENEYE

SUPER MARIO 64

F-ZERO X

GOLDENEYE

» **RELEASED:** 1997
» **DEVELOPED BY:** RARE
» **BY THE SAME DEVELOPER:** SABRE WULF

When Rare's *GoldenEye* first appeared in 1997 first-person console shooters were instantly given a massive shot in the arm (pun fully intended) and its impact sent shockwaves through the industry that continue to be felt to this day. Sniper rifles, four-way split screen, multiple missions, even duel analogue support (via two N64 pads) all made their first-person console debut in Rare's excellent shooter and even today it remains incredibly fun to play.

With its wonderfully designed missions, intelligently structured level design, excellent array of weaponry and utterly amazing multiplayer it should come as no surprise to learn that the only N64 game to ever succeed it was the development team's very own *Perfect Dark*. High praise indeed.

THE LEGEND OF ZELDA: THE OCARINA OF TIME

» **RELEASED:** 1998
» **DEVELOPED BY:** IN-HOUSE
» **BY THE SAME DEVELOPER:** SUPER MARIO BROTHERS

We remember playing *The Ocarina Of Time* like it was yesterday. Link's tearful farewell to Saria, learning about the Deku Tree's imminent death, walking out onto the vastness of Hyrule field, playing the titular Ocarina for the very first time – they're all moments that become indelibly etched on your mind forever. If *Super Mario 64* proved that classic 2D franchises could work perfectly well in 3D, it was *Ocarina* that truly showed console owners just how much breathtaking scope the third dimension could actually offer them. No other adventure in recent memory has matched the perfection of *Ocarina Of Time*, and it's quite possible that none ever will.

SUPER MARIO 64

» **RELEASED:** 1996 (1997 UK)
» **DEVELOPED BY:** IN-HOUSE
» **BY THE SAME DEVELOPER:** DONKEY KONG

Few videogames have made the tricky leap from 2 to 3D as successfully as Shigeru Miyamoto's *Super Mario 64*. From the moment the Italian plumber's cheerful fizzog appears on the title screen to the final boss encounter, Mario's first three-dimensional outing feels as natural as breathing. Beautifully structured, perfect to control (unlike the recent DS outing) and home to one of the finest 3D cameras ever created, *Super Mario 64* retains its title as the finest 3D platformer ever made. And if that's not a good enough reason to include it in this top ten, then we don't know what is. A masterpiece of game design that no true gamer should miss.

LYLAT WARS

» **RELEASED:** 1997
» **DEVELOPED BY:** IN-HOUSE
» **BY THE SAME DEVELOPER:** SUPER MARIO WORLD

Playing through *Lylat Wars* (or *Starfox 64* if you're overseas) is like taking part in your very own space movie – hell it's actually better than many of the *Star Wars* games. Everything about *Lylat Wars*, from its soaring operatic music, to its jaw-dropping visuals has been done on such an impressive scale that you can't helped but get fully immersed within the on-screen action. This sense of immersion is captured perfectly by your more-than-able Arwing co-pilots. Slippy, Peppy and Falco are now fully fleshed-out characters, while the opposing Starwolf team ignites an intense rivalry that was never apparent in *Starwing*. Fighting the forces of Andross has never been so much fun.

F-ZERO X

» **RELEASED:** 1998
» **DEVELOPED BY:** IN-HOUSE
» **BY THE SAME DEVELOPER:** WAVE RACE 64

Okay, so it was yet another SNES update, but no other racer on the N64 (with the exception of Nintendo's very own *Wave Race 64*) came close to matching the sheer speed and excitement that *F-Zero X* offered. It may not have been the prettiest of games – there's a distinct lack of detail and plenty of fog – but it was amply compensated by the fact you could race against 29 other cars and that its snaking tracks zipped along at a blisteringly smooth 60 frames-a-second (something no 360 racer has currently achieved). With *F-Zero X* Nintendo managed to capture the very essence of racing in a 128mbit cart – nothing more, nothing less.

THE LEGEND OF ZELDA: THE OCARINA OF TIME

LYLAT WARS

BANJO KAZOOIE

NINTENDO 64

Nintendo's 64-bit console might not have a vast library of games, but it still has a lot of good ones. In fact, several are still considered by many to be the best of their genres. Here are 10 classics which still hold up strongly today

WAVE RACE 64

BLAST CORPS

BANJO KAZOOIE

» **RELEASED:** 1998
» **DEVELOPED BY:** RARE
» **BY THE SAME DEVELOPER:** DIDDY KONG RACING

If proof was needed that Rare could do no wrong on Nintendo's N64, look no further than this superb platformer. Featuring a fascinating gameplay mechanic – Banjo and Kazooie could be manipulated in a variety of different ways to solve problems – beautiful looking visuals and some fiendishly clever level design, Rare nearly managed to do the impossible and create a game that was better than *Super Mario 64*! Brimming with charm and humour – special mention must go to the hilarious hoedown at the beginning of the game— and with just the right amount of item-collecting, *Banjo Kazooie* is a platform fan's dream and should be played by anyone with even a passing interest in the genre.

WAVE RACE 64

» **RELEASED:** 1996 (1997 UK)
» **DEVELOPED BY:** IN-HOUSE
» **BY THE SAME DEVELOPER:** F-ZERO

***Wave Race 64* was one of the first launch games for Nintendo's new 64-bit console and it instantly set a precedent due to its incredible physics, convincing water and superb gameplay.** The aforementioned physics allowed you to feel every ebb and swell that your jetbiker raced across, while the beautifully constructed courses ensured that you'd constantly return to them to shave precious seconds off your previous lap times. Ten years on and it's still considered by many to be one of the N64's greatest racers. After returning to it at this year's Retro Fusion event, it's not a statement we're going to argue with.

SUPER SMASH BROS

» **RELEASED:** 1999
» **DEVELOPED BY:** HAL LABORATORY
» **BY THE SAME DEVELOPER:** KIRBY'S DREAM LAND

Trust Nintendo to take a popular genre (in this case the beat-'em-up) and add its own unique spin to it. *Super Smash Bros* allowed 12 of Nintendo's most popular videogame characters to battle against each other in an ecstatic orgy of over-the-top cuteness. Four brawlers could take part and the aim of the game was simplicity itself: send your opponents flying from the ring before they do the same to you. While it lacked intricate special moves and the depth of titles such as *Street Fighter II*, the sheer amount of items you had access to – everything from lightsabers to Pokémon balls – and the chaotic battles easily made up for *Smash Bros'* few shortcomings.

BLAST CORPS

» **RELEASED:** 1997
» **DEVELOPED BY:** RARE
» **BY THE SAME DEVELOPER:** GRABBED BY THE GHOULIES

Rare's second N64 title was a game of such twisted brilliance that we're surprised a sequel to it has never appeared. When an out-of-control missile is set to destroy the world, you have to clear a path for it by jumping into a variety of different machines (including two giant robots) and destroying as much of the landscape as possible. The sheer destructive nature of the game harks back to the old arcade games of old, while Rare further fuelled the nostalgia buds by offering a variety of bonus levels that mimicked everything from *Pac-Man* to *Defender*. A refreshing, unique title that proved just what a powerhouse the N64 could be in capable hands.

SIN & PUNISHMENT

» **RELEASED:** 2000
» **DEVELOPED BY:** TREASURE
» **BY THE SAME DEVELOPER:** MISCHIEF MAKERS

Treasure may have only released three games for the Nintendo 64, but we consider every single one of them to be a work of art that deserves to be played again and again.

For the Perfect Ten we've gone with the superb *Sin & Punishment* though, because it pushed the machine like no other game. A simple on-rail shooter at heart, *Sin & Punishment* is nevertheless a giddying rollercoaster of a ride that instantly grabs you by the balls and doesn't let them out of its vice-like grip until the whole dizzying experience is over.

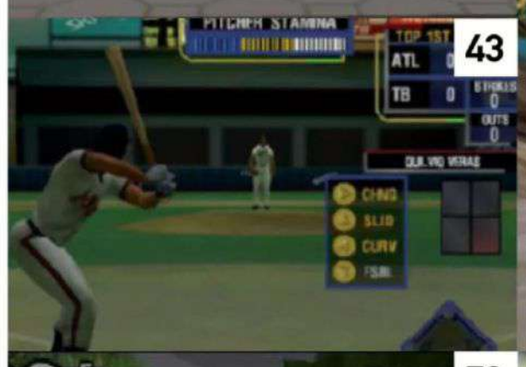
SUPER SMASH BROS

SIN & PUNISHMENT

NINTENDO64 and the rest...

Nintendo's 64-bit wonder wasn't only the last home console to use cartridges for storage, it also appeared to have more essential games than any other system. Don't believe us? Then check this little lot out…

01 AEROFIGHTERS ASSAULT
02 CHAMELEON TWIST
03 DIDDY KONG RACING
04 FIGHTER'S DESTINY
05 STAR SOLDIER 64
06 MARIO KART 64
07 DUKE NUKEM 64
08 ROBOTRON 64
09 PGA EUROPEAN TOUR
10 AEROGAUGE
11 SAN FRANCISCO RUSH
12 JET FORCE GEMINI
13 EXITEBIKE 64
14 QUAKE
15 SNOWBOARD KIDS
16 FORSAKEN
17 CYBER TIGER
18 MYSTICAL NINJA STARRING GOEMON
19 WETRIX
20 STAR WARS: SHADOWS OF THE EMPIRE
21 MICRO MACHINES 64 TURBO
22 RIDGE RACER 64
23 TUROK RAGE WARS
24 MORTAL KOMBAT 4
25 ARMOURINES PROJECT S.W.A.R.M.
26 ARMY MEN: SARGE'S HEROES
27 RESIDENT EVIL 2
28 EXTREME-G 2
29 POKÉMON PUZZLE LEAGUE
30 COMMAND & CONQUER
31 RAMPAGE WORLD TOUR
32 GLOVER
33 WAVE RACE 64
34 BATMAN BEYOND: RETURN OF THE JOKER
35 PUYO PUYO SUN
36 DONKEY KONG 64
37 ROAD RASH 64
38 BAKURETSU MUTEKI BANGAI-O
39 RAKUGA KIDS
40 CRUIS'N USA
41 MISSION IMPOSSIBLE
42 THE LEGEND OF ZELDA: THE OCARINA OF TIME
43 ALL-STAR BASEBALL 2000
44 STAR WARS: EPISODE 1 RACER
45 BASS HUNTER 64
46 MARIO GOLF
47 WIPEOUT 64
48 BATTLETANX
49 POKÉMON SNAP
50 FLYING DRAGON
51 TUROK: DINOSAUR HUNTER
52 BEETLE ADVENTURE RACING
53 LYLAT WARS
54 WCW NITRO
55 BANJO-TOOIE
56 SPACE STATION SILICON VALLEY
57 KIRBY 64: THE CRYSTAL SHARDS
58 GOLDENEYE
59 SIN & PUNISHMENT
60 CONKER'S BAD FUR DAY
61 SHADOW MAN
62 MARIO PARTY 2
63 DUKE NUKEM: ZERO HOUR
64 RAYMAN 2: THE GREAT ESCAPE
65 KILLER INSTINCT GOLD
66 SUPER SMASH BROS
67 SUPER MARIO 64
68 1080° SNOWBOARDING
69 TUROK 2: SEEDS OF EVIL
70 MARIO TENNIS
71 PAPER MARIO
72 BLAST CORPS
73 ROCKET: ROBOT ON WHEELS
74 POKÉMON STADIUM
75 DR. MARIO 64
76 PERFECT DARK
77 THE LEGEND OF ZELDA: MAJORA'S MASK
78 BOMBERMAN 64
79 GEX 64: ENTER THE GECKO
80 MISCHIEF MAKERS
81 HARVEST MOON 64
82 MEGAMAN 64
83 CASTLEVANIA: LEGACY OF DARKNESS
84 MICKEY'S SPEEDWAY USA
85 QUAKE II
86 MAGICAL TETRIS CHALLENGE
87 F1 WORLD GRAND PRIX



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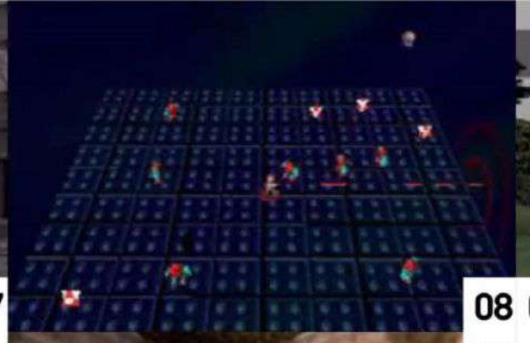

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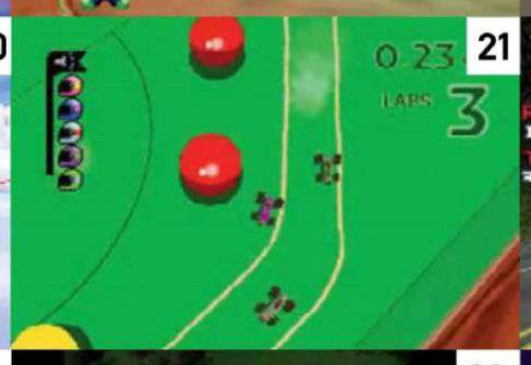

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SUPER MARIO 64

How do you follow up arguably the best 2D platform game of all time? Nintendo's answer was to provide the defining example of a 3D platform game at its very first attempt…

Perfect Polygons

How do you introduce a brand new concept but still retain your identity and heritage? It's a tricky thing to do, and a task that has tripped up countless games developers over the years. But for Nintendo the formula has always been simple – take an old property, find a way to update it with new technology, and reintroduce it to the market. The Nintendo 64's 3D games were most definitely a brand new concept, and Nintendo's ace Mario was the man for the job.

Of course, it's weird to think of *Super Mario Bros* as an "old" series, despite its longevity. The plumber's adventures have been ever-present for decades, after all. However, ▶

Strange New Worlds

Your traveler's guide to the new locations Mario is visiting

Peach's Castle

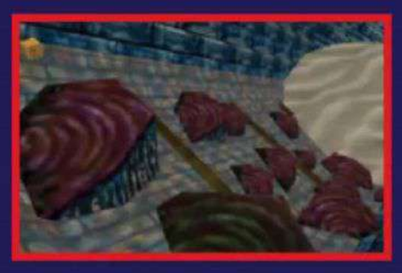
It might not be counted as a level in its own right, but the royal kidnap victim's homestead offers much to play around with and explore. Climb the trees, take a dip in the moat, or explore the basement – it's up to you what you choose to do here.

Bob-Omb Battlefield

This introductory stage is pretty gentle, in spite of the presence of the titular explosive enemies. Race against Koopa, avoid Chain Chomp and get your first experience with the cannon. When you're feeling bold, face King Bob-Omb.

Whomp's Fortress

Trickier platforming starts here, as you'll encounter narrow walkways and the nasty Piranha Plants. The big bad guy here is the Whomp King, who would be a rock hard opponent if he didn't highlight his weak spot with a bandage.



Jolly Roger Bay

Ships and sea life are the order of the day here. There are no bosses, but Unagi The Eel plays a big part in the second mission. Grab every coin as there are only 104 in the stage – you'll need almost all of them for the seventh star.

Cool Cool Mountain

Mario gets a warm reception from the penguins in this chilly stage. The cosy mountain lodge you start off next to hides a dangerous ice slide, which forms the basis of many star missions – you'll race on it and even hunt red coins on it.

Big Boo's Haunt

Mario's ghostly persecutors are back, and once they take over the castle's courtyard you'll be able to visit their spooky home. Like with *Super Mario World*'s Ghost House stages, puzzling is the order of the day here.

Hazy Maze Cave

This subterranean stage is filled with the worst kinds of nasties – Monty Moles, Snufits and Swoopers. This is also where you'll first encounter the Metal Cap, an item that turns Mario into a shinier, heavier version of his usual self.

Lethal Lava Land

Bowser gets to show off his inner egomaniac here, as he's made a gigantic sliding puzzle featuring his own image. Of course, he's done this in an environment where he feels at home, which means you should expect hot lava.

Shifting Sand Land

This dusty desert features everything you'd expect, including a pyramid and some hazardous twisters, as well as the Pokeys that seem to inhabit dry areas within the Mushroom Kingdom. As you might imagine, the pyramid is central to many of this world's stars.

Dire Dire Docks

This area contains the pride of Bowser's naval fleet, an enormous submarine! Who knew he even had a naval fleet in the first place? You need to visit this stage to fight Bowser a second time, but it's worth it to meet one of the game's most memorable companions.

Snow Man's Land

This freezing stage is even colder than Cool Cool Mountain, and you'll find more penguins here. Less friendly are the Mr Blizzards and the icy Bully. There's a lovely igloo here, but our favourite bit of the level involves riding a Koopa shell to grab red coins.

Wet-Dry World

If it seems like the water level is never consistent in Wet-Dry World, watch where you jump into the level's painting – the higher you go, the higher the water. There's a neat town area here that seems to have been abandoned to the floods.

Tall Tall Mountain

As the name suggests, this rocky course is a hefty beast to scale, and you'll need to do so for your first star. At the lower levels, you'll encounter big mushrooms, and one of the stars involves relying on a primate to lead the way. Good job he's not from the Kong family!

Tiny-Huge Island

Size matters in this stage, as our hero encounters two portraits to enter it. If he visits the small one, Mario will be comparatively enormous, but on the large island he'll be tormented by enormous Goombas. Both sizes of island are required to gain certain stars.

Tick Tock Clock

The trickiest timepiece of all time hosts some fiendish challenges, as well as pendulums of impressive scale. It's also the area that most clearly illustrates the difference between the game's two major versions – the DS version has been extensively reworked.

Rainbow Ride

Mario goes sky-high for the last of the game's regular stages, hopping between floating islands on magic carpets. You won't find a wing cap here, so Mario won't be doing any flying of his own.

» Lakitu follows you about with a trusty camera, showing you everything that happens in the game.

it was a series that slowed down enormously after its initial hits. The original *Super Mario Bros* NES trilogy and the sublime *Super Mario World* for the SNES appeared in quick succession, but then Mario's platforming adventures came to a sudden stop. Our portly protagonist started his hit tour of other genres, and platform games were given over to the likes of Yoshi. By 1996, it would be fair to say that a proper Mario platform game had been long-awaited.

The problem that Nintendo had to solve was how to even present Mario in 3D. Shigeru Miyamoto had reportedly toyed with the idea of a Super FX-powered 3D platform game for the SNES, and decided against it. Later, during the development of the Nintendo 64 hardware, the team experimented with linear levels with an isometric-style camera position. In the end, Nintendo EAD went with free-roaming 3D levels that the player could explore at will, with no defined end point.

If that lack of a defined end point sounds like a huge break from *Mario* tradition, that's because it was. Even in *Super Mario World*, which wasn't a linear game, each level had a start point, an end point and a series of challenges to overcome along the way. In *Super Mario 64*, the nature of those challenges had to change significantly because of Mario's new-found freedom of movement. Even a Goomba was a threat in *Super Mario Bros* – at the very minimum, it forced a button press to jump onto or over it. In *Super Mario 64*, dealing with a Goomba would most often be a simple case of running around the problem.

As a result, traditional "reach the goal" platform gameplay was ▶

Magic Moments

Super Mario 64 was full of memorable bits – here are some of our favourites

Racing A Koopa

1 Your first taste of how differently *Super Mario 64* operates is likely to come when Koopa The Quick decides to chat with Mario, rather than simply wandering into him. He wants a race – and Mario loves to race.

Discovering Your First Secret Star

2 Wandering into an empty room, you find yourself jumping against the walls for the heck of it, only to discover a secret passage through a window to a slide racetrack. Wow! Even the hub world can help you progress...

Big Bad Bowser

3 You've faced him countless times before, but now Bowser is not only huge, he's got a positively evil expression on his face and it's much worse in 3D. You're locked in combat with him until he eats his own bombs a few times.

Tinkling The Ivories

4 Is it possible to be frightened by a *Mario* game? Not often, no. But this gave many players a fright. As you pass the piano in Big Boo's Haunt, all seems normal – right up until it grows teeth and starts chasing you.

A Ray Of Sunshine

5 The PlayStation had a manta ray tech demo, but the common question when it came to *Super Mario 64* was "Have you got to swim around with the manta ray yet?" It's clear why people raved.

Taking To The Sky

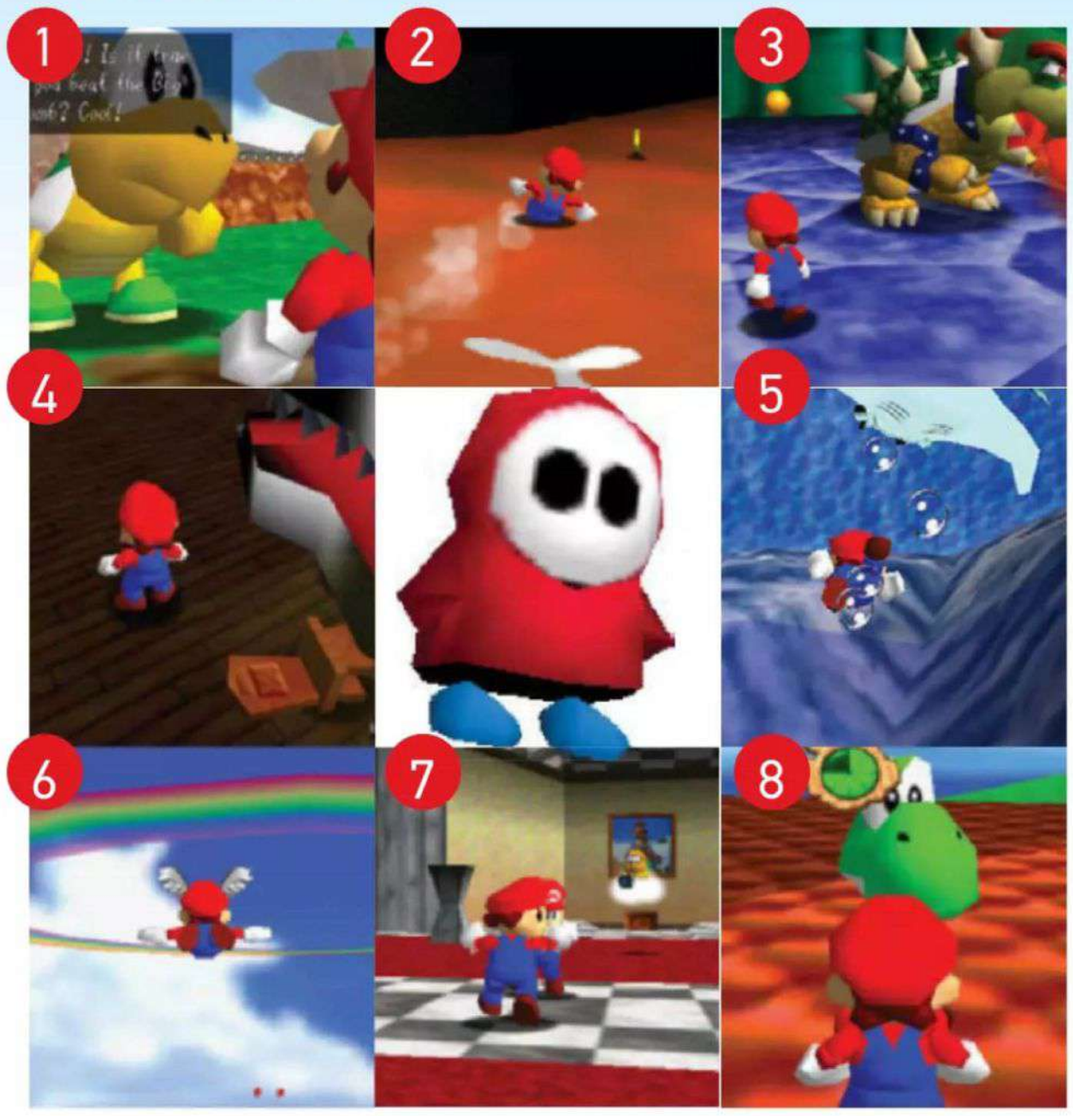
6 Mario has been airborne before in *Super Mario Bros 3* and *Super Mario World*, but the glory of full 3D flight is a different matter altogether. Thankfully you can experience it with the wing cap, which affords our hero flight.

Man In The Mirror

7 When you come across a mirror in the castle, take a gander at Mario. Not to admire his 'tache (though it is quite lovely), but to realise the attention to detail here – Lakitu's following Mario around with a camera, documenting everything.

A Familiar Friend

8 Once you've beaten *Super Mario 64* with all 120 stars, you might think that you've exhausted the game. But there's still one more thing left to do – scale the castle and visit Yoshi, who waited until you'd done all the work.



Reach For The Stars

Getting all 120 stars is no easy task – here's how to nab some of the trickier ones...

Metal-Head Mario Can Move!
Course: Hazy Maze Cave

■ As Metal Mario, you need to follow a brown path across the floor of the underground lake in order to avoid slipping off course. The trick here is to go quickly – you've only got a limited time as Metal Mario.

Stomp On The Thwomp
Course: Tick Tock Clock

■ There's a lot of tricky timed platforming to do before you reach the Thwomp of the title, and you don't need to attack it – you just need to hitch a ride on it in order to get the height needed to reach the star.

Big Boo's Balcony
Course: Big Boo's Haunt

■ Make your way to the third floor of the house in order to have a scrap with your foe, Big Boo. You can beat him by hitting him from behind. Then you need to make your way to the roof of the house to claim the star.

Wing Mario Over The Rainbow
Course: Peach's Castle

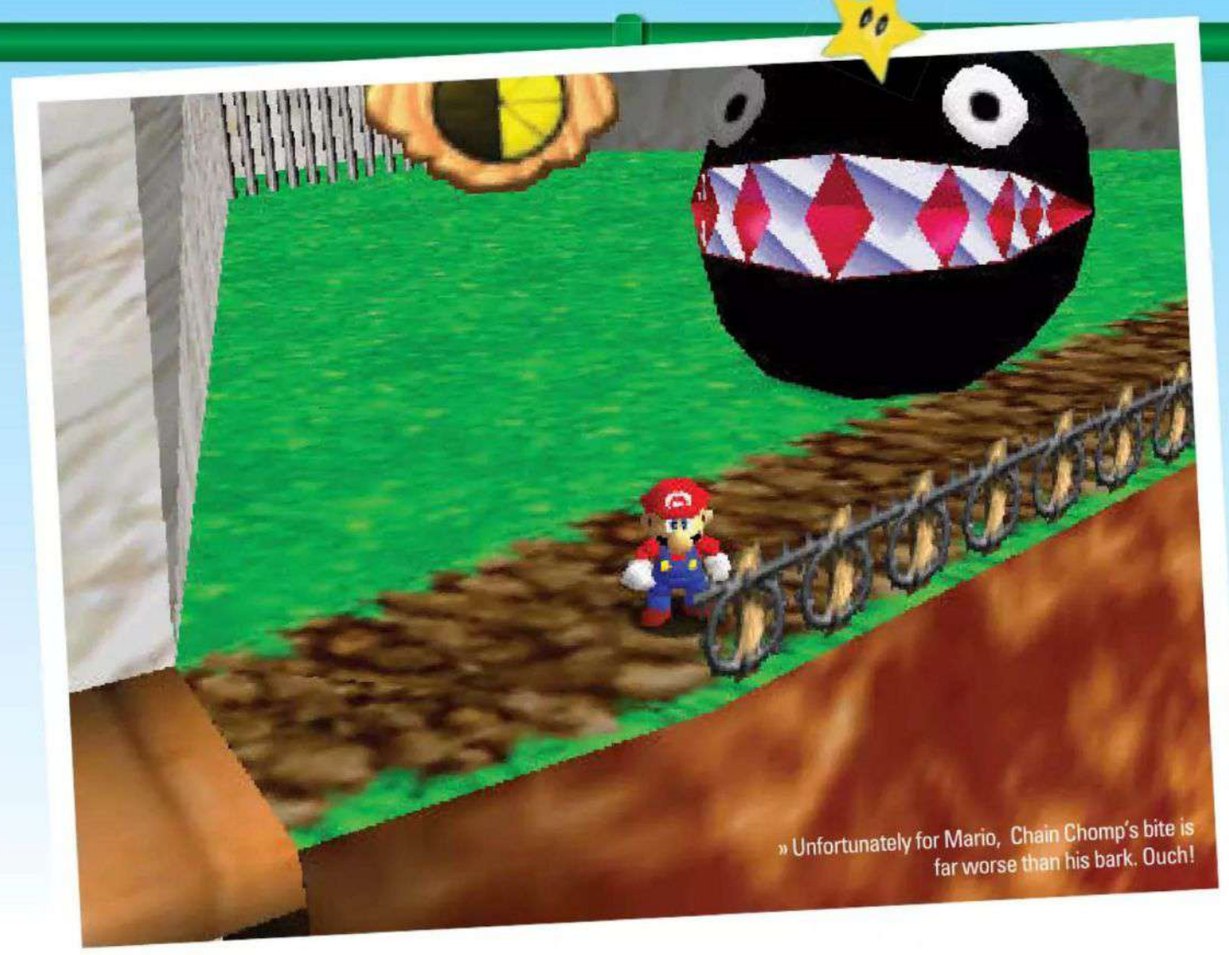
■ You need to work out a route – you've got access to cannons and the wing cap. Remember that Mario can fly straight through the transparent clouds, and stop off for new wing caps periodically.

100 Coins
Course: Rainbow Ride

■ 100 coins? That's a goal in every level, but it's a particularly nasty one in Rainbow Ride because death resets the counter, rendering all your progress pointless. The only advice for this one is to be very careful indeed...

Somewhere Over The Rainbow
Course: Rainbow Ride

■ Go find the Bob-Omb Buddy (he's in the coin maze, where you found the third star) and then get to the cannon on the airship. Now shoot towards the far-off platform – aim well or die!



» Unfortunately for Mario, Chain Chomp's bite is far worse than his bark. Ouch!

"Mario has a variety of new moves, from jump variations like the triple jump to his ground pound"

▶ decidedly out of the question. Instead, a system of multiple goals was included within the game – each of the game's worlds contained six Power Stars, gained by completing missions within the world. These had a variety of forms, from battles against mini-bosses to races and treasure hunts. Additionally, every world offered a bonus star for finding 100 coins. It was an innovative way to take advantage of the space afforded by the new 3D stages, but it also proved to be a necessity – with just eight megabytes of cartridge space to play with, the developers only had room to include 15 stages.

Much like the levels themselves, the order in which you tackled them was up to you – as long as you had enough Power Stars to hand. Even getting to those levels was a treat, as the maps of *Super Mario Bros 3* and *Super Mario World* gave way to Peach's Castle, the most interactive level selection menu in *Mario* history. Not only was the castle a nice sandbox area for Mario to run about, it had a variety of secrets of its own from a cool slide to a basement-dwelling rabbit called MIPS, and discovering them would earn you further stars. As you gathered stars, previously locked doors would open up and allow access to new stages.

» Congratulations, you've earned yourself a star. Only another 119 to go...

But for all of the amazing level design and innovative structure, *Super Mario 64* would have fallen flat if the game didn't have the same tight feeling as the 2D *Mario* games. Luckily, the joy of the game is in its movement. Mario has a variety of new moves, from jump variations like the triple jump and backflip to his ground pound, a move which sent our hero plummeting buttocks-first into the floor. Likewise, the physics worked beautifully – even watching Mario fail to make it up a steep slope is entertaining, as his little legs work overtime before giving out and leaving him to slide downhill on his belly. Crucially, every item – including Mario – has a fixed shadow beneath it, providing a helpful guide for players unused to controlling characters in a 3D space.

As you might expect of such a revolutionary game, *Super Mario 64* was the recipient of enormous acclaim from the press. The debut issue of *N64 Magazine* capped a 14 page review by telling readers that the game was "so far ahead of everything that comparisons seem meaningless," awarding it 96%. *Maximum*'s final issue declared it "an almost mind-expanding experience," and it was the first

Pyramid Puzzle
Course: Shifting Sand Land

■ It's a long and arduous trek for this star, as you need to find five very particular coins in this puzzling level. Two are on platforms near a sand duct, and the other three are located where the sand moves to the first floor.

Blast To The Lonely Mushroom
Course: Tall Tall Mountain

■ This one's a real pain to obtain – there are lots of ways you can do it, but we feel the best is to find the portal in the mushroom clump, get to the cannon and shoot your way to victory.

Can The Eel Come Out To Play?
Course: Jolly Roger Bay

■ Hang around Unagi's hidey-hole to lure him out, then catch the star on his tail. The key is timing – if you don't move as soon as he does, you'll likely need to surface for air.

Elevator Tour In The Volcano
Course: Lethal Lava Land

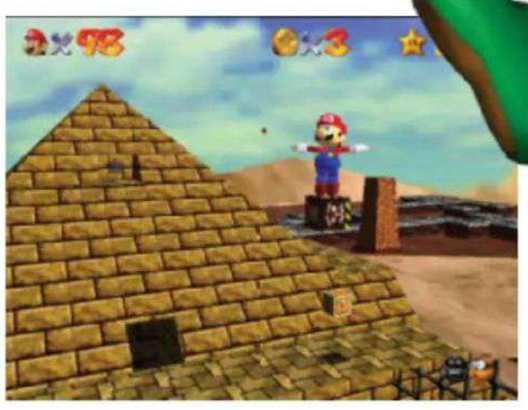
■ Tricky platforming is the order of the day. Get into the volcano, then prepare for precision platforming – you'll need to recognise when the checkered platforms are about to drop into the lava.

game ever to receive a maximum score of ten from *Edge*. If there was a single blotch on the otherwise spotless record of universal acclaim that *Super Mario 64* received in its day, it was that the camera system was not quite perfect. That didn't matter a jot as the game was an absolutely enormous hit, selling 11.62 million copies – or to put it another way, it was bought by over a third of N64 owners.

In fact, the only problem for Nintendo was topping it. *Super Mario 64* ended up being the best-selling game for the N64, as a sequel spent years in the works but ultimately never made it into full development. The eventual Gamecube sequel *Super Mario Sunshine* was a great game in its own right, but not the revolutionary experience that its predecessor had been, and even the astonishingly creative *Super Mario Galaxy* borrows much of its game design from Mario's first foray into 3D.

Beating *Super Mario 64* was a nice problem to have though, especially since everyone else was playing catch-up.

Developers around the world aren't shy about admitting that the vast majority of 3D videogames owe something to *Super Mario 64*, whether they drew inspiration from its mission-based structure, Mario's movement, the camera design or even the hub world. It's an astonishing accomplishment, especially for a launch game – a perfect demonstration of its hardware, a revolution in game design and a best-seller. Games like *Super Mario 64* don't come along every day, or even once in a generation. *Super Mario 64* might well be the kind of forward jump for videogames that comes along once in a lifetime.



DS Excess

The story didn't end on the N64...

If you have a genre-defining 3D platform game under your belt from the debut of your 3D-capable home console, it seems almost silly to leave it lying dormant when you introduce 3D to another new market. Thus, Nintendo brought *Super Mario 64* to the Nintendo DS when the handheld system arrived in stores at the tail end of 2004. However, *Super Mario 64 DS* was far from a straightforward conversion – it actually ended up being an enhanced remake of sorts, with changes to quite a few aspects of the game.

The biggest addition was the inclusion of three new characters – Luigi, Wario and Yoshi, each with their own special attributes for jumping, power and speed. The game also includes new missions for a total of 150 Power Stars, up from 120 in the original, and some of the game's graphical elements have been updated for the new hardware.

Super Mario 64 DS wasn't critically successful as the original, in large part due to the digital controls players had to make do with, but it was a hit in sales terms. 11.06 million copies have been sold, putting it only slightly behind the N64 game.

International Superstar Soccer '98

BUILDING A LEGACY, PES BY PES

» RETROREVIVAL

» NINTENDO 64 » KONAMI » 1998

The title clash of *PES* vs *FIFA*, which still happens every year like clockwork, has been fascinating to watch unfold into an incredible rivalry. But as much as the silverware has changed hands since the two started going at it, it's amazing how little has changed in terms of the attitudes of the two franchises. *PES*, or *ISS* as it was prior to the PlayStation rebranding, has always put gameplay first, often at the cost of presentation – player names and likenesses tend to be wrong (comically so on occasion) and official licences are rare, while FIFA's goal is and has always been to offer football fans the most authentic digital recreation of the match day experience possible.

The overwhelmingly complex controls of modern releases pretty much came in with the *PES* rebranding, with the *ISS* games that preceded that typically being quicker and more arcade-like in gameplay, not unlike the *Virtua Striker* games, in fact. On a console like the N64, this degree of accessibility made perfect sense – players used to the colourful and friendly experiences that were typically released on the console wouldn't have been able to fully appreciated a true simulation of the sport, nor most likely would the console's unique controller.

Given that *ISS Pro Evolution* would lead the series down this path as soon as the following year, *ISS '98* stand up today as one of the last great arcade-style football games, offering a nice degree of depth that means you can't just belt in overhead kicks on command, yet that still enables the kind of fast, flowing plays that are far less common in later games. ✱

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THE LEGEND OF ZELDA

OCARINA OF TIME

Recently, Retro Gamer readers voted Ocarina Of Time the second greatest game of all time. We caught up with numerous classic developers to find out why Nintendo's epic 64-bit console classic still has the power to enthrall and enchant gamers after all these years

When all is said and done, a great game is measured simply by the journey you've taken – that moment when you reflect on the hours you've invested and ask yourself 'was it really worth it?'

The best games in history have all provided us with memorable adventures we've enjoyed taking a commanding role in, adventures we've felt a strange polarised sense of disappointment and pleasure at seeing the credits roll, enjoyed paying a revisit to once or twice, and have provided us with memories we will likely carry with us forever – because we were there and we made them happen. For you, perhaps these include something as simple as rescuing Pauline from the clutches of Donkey Kong, or maybe you remember specific parts of bigger pictures most fondly – like the time you finally found you could pull off Dragon Punches on command (grasping the natural technique and not simply following inputs), slaughtered your first Cyberdemon, or crossed the finish line in *OutRun*.

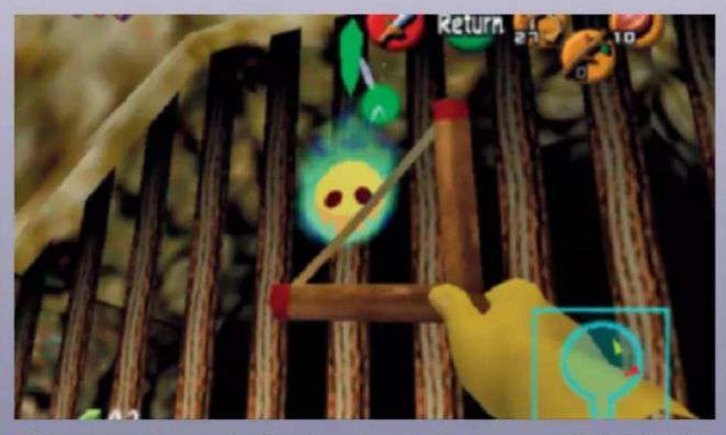
That *Ocarina Of Time* is a game bursting at the seams with memorable moments like these all wrapped up inside one epic adventure makes it not only the best *Zelda* game in the series but, for many people, one of the greatest videogames as well. It's a game that takes you on the most perfect kind of adventure, one that anyone of any age can easily relate: you're the hero, you scale the castle, defeat the villain, rescue the princess, and in doing all of that restore peace to the land and become the stuff of legend.

While there can be no question that the original *The Legend Of Zelda* was a true watershed moment for videogames, and *Ocarina* owes it a sincere debt of thanks for putting the core pieces in place, it was merely a small portion, a compromise if you like, of what series creator Shigeru Miyamoto had actually envisioned for Link, Zelda, Gannon and the land of Hyrule. Since *Ocarina*'s release, Zelda's creator has revealed that *Ocarina Of Time* marks his true original vision of the world – it is the land of Hyrule he imagined, finally brought to life.

Back in 1986, when that first game in the series was released, technical constraints meant Miyamoto could only project the core themes of *Zelda* on the screen – staples such as the three central characters, the Triforce, Hyrule, the sense of freedom, and of course the dungeons. And as early as its first sequel, it was clear Miyamoto was beginning to think more about how, having smashed the pegs into the ground, he could start erecting his true image for Hyrule using the modest powers of the NES.

The Adventure Of Link, while widely branded as the 'black sheep' of the series, shares a number of striking similarities with the franchise's golden calf. The sequel added side-on platform sections that transported gamers into the heart of Hyrule, with this new viewpoint used to create village sections filled with people with which Link could interact and converse with during his quest. Not only would this help to breathe a greater sense of life and immersion into the world, but also weight a greater sense of responsibility on the shoulders of the player too.

» As the title implies, Ocarinas play an essential part in the story. Throughout his quest Link learns new songs that he must play to solve puzzles.



» The original plan was for *Ocarina* to be entirely first-person. While this idea was dropped, the perspective was kept for looking and aiming.

The sequel also had a stronger emphasis on action. Link could now cast spells (in *Ocarina Of Time* Link could do the same, and a new magic meter allowed him to perform special charge attacks) and earn experience points to improve his attacks. While this levelling up mechanic was promptly dropped by the series soon after, this aspect of character development still played a big part in *Ocarina Of Time*'s gameplay – just now it was done by the far more interesting means of acquiring new gadgets, items, additional heart containers and better weapons during the quest.

But while *Ocarina* appears to be inspired most by *The Adventure Of Link*, the game also took a number of popular ideas and themes from other sequels too. The ocarinas, for example, which play a big part in helping you progress in the story, made their first appearance in the Game Boy game *Link's Awakening*, while *A Link To The Past*'s dark and light realms also returned, with Link aging seven years in the game to see the devastating effect Ganondorf's rule has had on the kingdom of Hyrule.

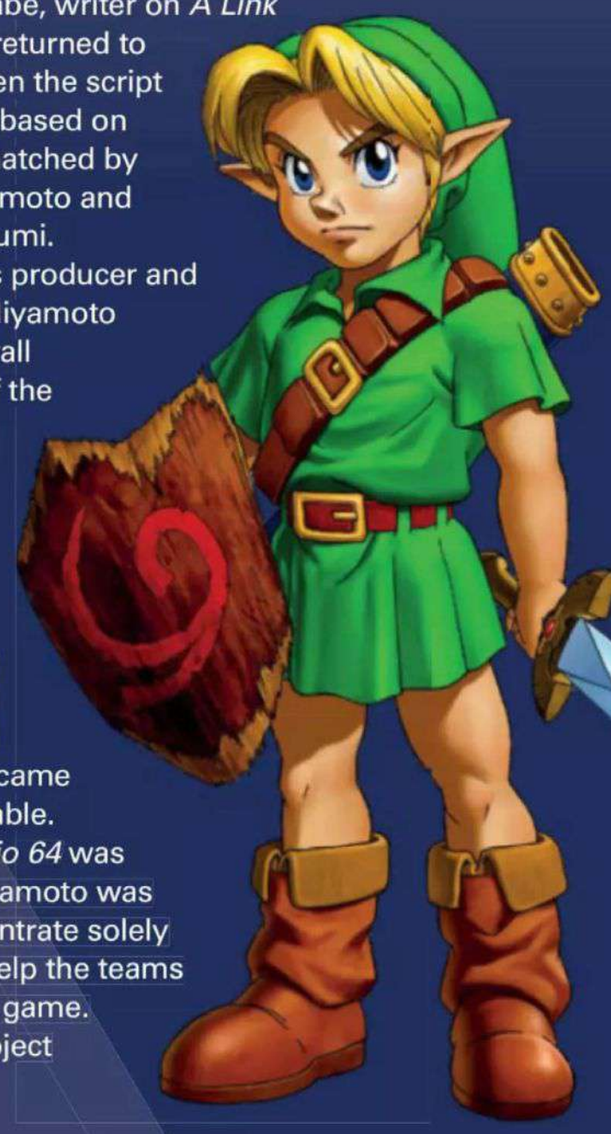
"When the project started, the team working on the game numbered around 15 people; by the time it neared completion this number had swelled to 50"

Ocarina Of Time was first unveiled at Nintendo's Space World event in December 1995. Shown to a floor of astonished and excited attendees, Nintendo announced that the game would be ready in time to become a launch game for its successor to the Super Nintendo, the Nintendo 64. But with the launch just a year away, that projection proved a little ambitious. *Ocarina* didn't actually appear until the end of November, two years after the launch of the N64 in Japan, following a number of delays.

Designed on a heavily altered version of the *Mario 64* engine, *Ocarina*'s creation was handled by Nintendo's EAD branch, with different parts of its creation overseen by various teams headed up by different directors. Each team focused on areas such as scripting and story scenarios, Link's actions and camera controls, and coming up with the various items for him to use in the game. As the development progressed, further teams were added, overseeing aspects such as sound and special effects in the game. Finally, Kensuke Tanabe, writer on *A Link To The Past*, returned to once again pen the script for the game based on a story idea hatched by Shigeru Miyamoto and Yoshiaki Koizumi.

Working as producer and supervisor, Miyamoto oversaw overall production of the game, giving ideas to the directors to develop and also it was his responsibility to see that all the individual componants came together suitable.

When *Mario 64* was released, Miyamoto was able to concentrate solely on *Zelda* to help the teams complete the game. When the project



started, the developers working on the game numbered around 15; by the time it neared completion this number had swelled to 50.

A number of things delayed *Zelda*'s release. As well as its development moving across to the 64DD at one stage (with the plan to make it a launch game for the N64 disk-drive add-on), when thinking of how best to fully immerse the player in Hyrule like never before, Miyamoto had originally wanted the game to play out entirely in the first-person too. This idea, however, was dropped after it was decided that during the game the player would control Link both as a boy and then as an adult, and the idea would have lost much of its impact if Link remained out of sight for the majority of the adventure. Surprisingly, the game's memorable story was actually incorporated and finalised at the latter stages of the game's design.

In keeping with the game's focus on immersion and displaying the land of Hyrule in the best possible way, it was Miyamoto's intention that the camera in the game had a spotlight on Hyrule rather than Link and his actions. This decision made logical sense in the adventure game setting. In *Mario 64*, players benefited greatly from having fluid and clear sight over Mario at all times, helping them to get well accustomed to his new abilities and negotiate platform sections

Magic Moments

We relive some of our favourite moments from Ocarina Of Time

Kokiri Forest

YOU START THE game in Kokiri Forest, Link's village, and can spent ages exploring it before venturing out into Hyrule Field. Acting almost as a training dungeon, Link has to retrieve both a sword and the Deku Shield to be granted an audience with The Great Deku Tree. When both objects are retrieved, Link then enters the tree and embarks on his first dungeon. Once complete, the tree warns Link of Ganondorf's evil intent, rewards him with the first spiritual stone and tells him to speak with princess Zelda.

Hyrule Field

MANY *ZELDA* FANS remember the first time they set foot onto Hyrule Field in the game as being a special and defining moment in gaming. The point at which *Ocarina* really starts to reveal its size and majesty, the field acts as a hub stage and is surrounded by various different areas, all populated by the different races that populate Hyrule. When you make your way to Hyrule Castle and the sunlight in the sky fades, you cannot help but feel both impressed and captivated.

Taming Epona

NAVIGATING HYRULE FIELD by foot is fine to begin with but later on in the game you'll be covering a lot of ground; it's a good idea to pay a stop to Lon Lon Ranch located near the centre of the field. Visiting there as a child, Link meets Malon, the owner's daughter, who teaches him to play Epona's song on his ocarina. When he returns as an adult, and learns that Ganodorf has handed the ranch to devious range hand Ingo, Link uses the song to tame Epona and bust her out. She is then his to ride in Hyrule Field.

Meeting the Princess

AFTER AN UNNECESSARY *Metal Gear*-style stealth section, in which Link must avoid the glare of the guards as they patrol the grounds of the castle, he finally catches up with princess Zelda. Their encounters always memorable, she tells Link that she fears that Ganondorf is seeking the Triforce to rule Hyrule, and so asks him to retrieve the remaining two spiritual stones and get to its before he does. And Link does just that. Well, she is the princess after all.

Lord Jabu-Jabu

THERE ARE SOME imaginative and brilliantly designed dungeons in *Ocarina* but none more quirky than the belly of Lord Jabu-Jabu. One of the game's trickier dungeons to complete, it sees Link getting swallowed by the giant, sacred whale-like creature after giving him an offering of fish, and then having to travel through his extremely large stomach to find Ruto, the princess of the Zora race, and retrieve the final spiritual stone together.

Using the Ocarina

MUSIC PLAYS A big part in *Ocarina*, as is to be expected from a game with a musical instrument in the title. Not only is the audio in the game dynamic, quickly changing depending on what's happening, but its characters and many areas are also given their own unique motif too. Music also has a significant part to play in the quest and story, thanks to the eponymous ocarinas. Acquiring his first ocarina from Saria when he leaves Koriki Forest, Link continually learns new songs to aid him on his quest – tunes to open doors, befriend people, even for summoning help.

Becoming Adult

THE SEQUEL *A Link To The Past* was the first game to introduce the dual-realm mechanic to the series. Proving so popular, it was then reintroduced brilliantly in *Ocarina*. When Link enters the Sacred Realm his concentration is momentarily distracted by the Master Sword, allowing Ganondorf to seize the Triforce. When Link awakens seven years later, he's an adult, and the kingdom of Hyrule has been cast into darkness and despair as a result of Ganandorf's abuse of the powerful relic. Link is given a startling glimpse of what the future holds should he fail in his quest.

The many adventures of Link

Here's just a few of the adventures Link has been on since starring in Ocarina Of Time

The Legend Of Zelda: Majora's Mask

System: N64 **Year Released:** 2000

There are some people who actually prefer this to *Ocarina Of Time*, and it's easy to see why that might be the case. Unlike *Ocarina*, *Majora's Mask* is structured around a constant three-day cycle that sees Link changing into a variety of different characters, as he tries to stop Termina, the alternate world of Hyrule being obliterated by its out of control moon.

The Legend Of Zelda: Oracle of Seasons

System: Game Boy Color **Year Released:** 2001

Oracle Of Ages marked Nintendo's first collaboration with Capcom on its popular series. Linking together with *Oracle Of Seasons* (a password allows you to continue your adventure) it's an enjoyable quest that sees Link manipulating the seasons to solve a slew of clever puzzles. It lacks the imagination of *Link's Awakening* but remains a worthy handheld adventure.

The Legend of Zelda: Oracle of Ages

System: Game Boy Color **Year Released:** 2001

Oracle Of Seasons' counterpart shares similar elements with *Majora's Mask*, in that you must manipulate the flow of time to achieve the vast majority of your goals. It's another grandiose adventure that shares a fair few similarities with *A Link To The Past*, and was further proof that Capcom could treat the *Zelda* franchise with just as much respect as Nintendo.

The Legend Of Zelda: A Link To The Past & Four Swords

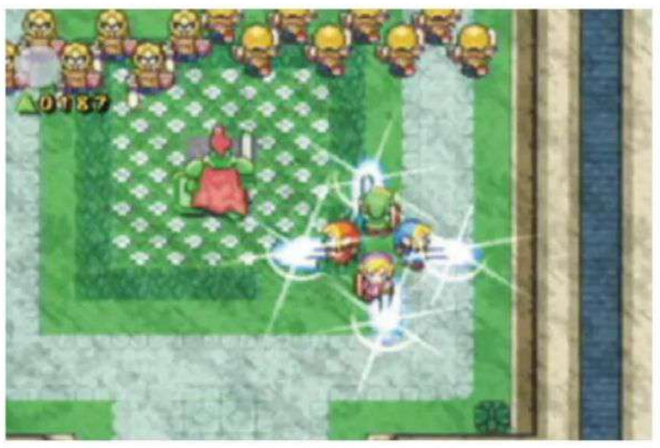
System: Game Boy Advance **Year Released:** 2002

Although *A Link To The Past* wasn't a new game, it was significant here as it introduced the smaller standalone adventure *Four Swords*. Created by Capcom, it's a clever little four-player game that was expanded for the later GameCube release. *A Link To The Past* was changed very little, but it's surprisingly well-suited to gaming on the go.

The Legend Of Zelda: The Wind Waker

System: GameCube **Year Released:** 2002

Many were put off by *The Wind Waker*'s cel-shaded visuals, which is a real shame, as they enabled Miyamoto to convey a sense of emotion in his characters that had never been seen before or since. The expansive ocean travelling put some off, but everyone else discovered another incredible adventure that easily captured the spirit of earlier games.



The Legend of Zelda: Four Swords Adventures

System: GameCube **Year Released:** 2004

Featured on page 84 of this very issue, *Four Swords Adventures* was the second outing for Link on GameCube, and took the series is a new direction. It's a superb four-player game that sees you either controlling four Links separately or teaming togethe. We'd kill for a Wii sequel – it's that good.

in a new 3D space. Such requirements were not really necessary in a *Zelda* game.

Since the release of *The Legend Of Zelda,* Miyamoto had always wanted to make players feel as if they were really inside Hyrule. With the N64 giving him the power to finally do this, Miyamoto and his teams thought about how best to make the player feel fully immersed in its world. And, in finding their answer, they came up with another of *Ocarina Of Time*'s best aspects: the controls.

To say the controls in *Ocarina* are attuned perfectly to the game world better than any 3D game that has come before or since is no exaggeration. Making full use of the crazy number of buttons on the N64 controller, Link was able to effortless navigate Hyrule. Simple but very effective inclusions – such as having him jump automatically whenever he was steered off the edge of a platform (considerately saving you the obvious job), and a context-sensitive A button which could be used to make Link wave his sword around, open doors, move objects, climb platforms, and converse with Hyrule's many memorable characters – made the game instantly playable.

Similarly, using items and viewing the world was made a breeze thanks to clever use of the controller's yellow C (camera) buttons. In third-person mode, items could be assigned to them to enable easy and immediate access during the game, while in first-person mode the same buttons offered total control over the game's camera to help you get your bearings and offer precision aiming for weapons such as the slingshot and boomerang. Combat, like everything else in *Ocarina Of Time*, was also made incredibly simple thanks to an innovative new combat system the game introduced that was called Z-targeting. An automatic aiming mechanic for Link's projectile weapons, it has since become combat staple in videogames and has been used in many games across various different genres.

"Every aspect of Ocarina felt well-considered; it was like the game was trying its hardest to make your stay in Hyrule as pleasurable as possible"

In addition to the game's obliging control scheme, players were also aided on their quest by a fairy helper called Navi. Acting as your guide throughout the adventure, and never away from Link's side, she would point out points of interest during the game as well as offer useful hints and suggestions to help you complete puzzles.

The Legend Of Zelda: The Minish Cap
System: Game Boy Advance **Year Released:** 2004

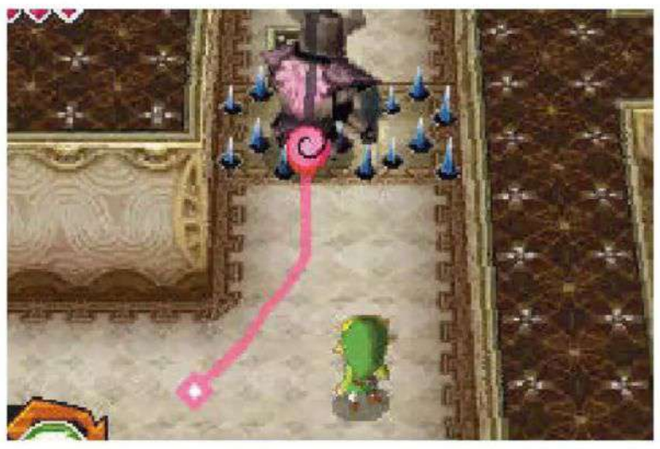
The Minish Cap is another fine effort from developers Capcom and dovetails nicely with the events of *Four Swords* and *Four Swords Adventures*. In addition to introducing a talking bird hat and a variety of excellent new items to collect, *The Minish Cap* also shrinks Link down for the vast majority of the game, which gives it a very distinctive look.

The Legend Of Zelda: Twilight Princess
System: GameCube/Wii **Year Released:** 2006

As good as *Twilight Princess* was, it was more a retread of ground covered in *Ocarina Of Time* than it was a brand new adventure. It was also hampered on the Wii thanks to controls that, while decent, weren't as accessible or intuitive as expected. Our advice would be to make the effort to hunt down the more expensive – but far more satisfying – GameCube offering.

The Legend Of Zelda: Phantom Hourglass
System: DS **Year Released:** 2007

Phantom Hourglass continues the adventures of cel-shaded Link, and proves to be another essential addition to the *Zelda* cannon. The little niggles of *The Wind Waker* have been fixed, while the interesting theme of going ever deeper into a core dungeon and some truly ingenious puzzles ensured that new adopters had plenty to invest in.



The Legend Of Zelda: Spirit Tracks
System: DS **Year Released:** 2009

Although we enjoyed *Spirit Tracks*, there was a distinct feeling that the franchise and well-used formulae of the past were beginning to run out of steam. The train sections proved disappointingly simplistic and monotonous, while the dungeons lacked the pizzazz and cleverness of precious offerings. It's still a great adventure, of course, but we're used to more from Link.

» This odd stealth section, which sees Link avoiding guards to reach princess Zelda, is one of the less impressive sections in the game.

Every aspect of *Ocarina* felt well-considered; it was like the game was trying its hardest to make your stay in Hyrule as pleasurable as possible, so that you'd tell all of your friends to pay it a visit, or maybe even decide to revisit it again yourself.

The story of *Ocarina Of Time* is set before the events of the first four games in the series, and sticks to the traditional *Zelda* template: Link must venture into a series of enemy-filled dungeons, find a desired object and then make his escape by defeating a gargantuan boss blocking the exit route. However, *Ocarina*, like *A Link To The Past* before it, is split into two very distinct sections. The first, which is set in a lush and vibrant-looking depiction of Hyrule, sees Link as a young boy, under orders from princess Zelda to retrieve three Spiritual Stones that will grant him access to the Sacred Realm where the Triforce is kept. Simply getting to this point can take players around a week – more should they embark on many of the side-quests – but this is less than halfway through the adventure. Upon unsealing the Sacred Realm, Ganondorf pilfers the Triforce and Link is sealed in the Sacred Realm.

It is once you reach this point that events take a dramatic turn. Seven years have now passed, and when Link awakens he is met by one of seven sages whose job is to protect the Triforce. Now a young adult, Link learns that Ganondorf has used the Triforce to cast the kingdom of Hyrule into darkness. Hope now rests with Link reawakening five dormant sages, by travelling to five temples in Hyrule to defeat Ganondorf's monsters and break his evil spell. If he succeeds, the sages can trap Ganondorf inside the Sacred Realm and restore the kingdom of Hyrule to its original state.

The moment that Link steps outside and sees the effects Ganondorf's reign has had on Hyrule – sapping it of all life, colour and beauty and turning it into a dark, depressing, shrivelled

» Unlocking Epona is one of the game's must-do side-missions – otherwise you'll make some pretty long treks across Hyrule Field.

» The music in the game was composed by Koji Kondo, who was responsible for creating the music in all of the main *Zelda* games.

up shell of its former self – is one of *Ocarina Of Time*'s many rug-pulling moments. Hyrule now looks ashen and volcanic; the walking dead replace the fizzy townsfolk; and Kokiri Forest is overgrown with deadly flora and vegetation, no longer a safe haven for Link, but the perfect place for evil to thrive.

Like that memorable scene in *Back To The Future 2*, where Marty returns to a bleak and unwelcoming image of the present in which Biff has become a casino magnate, it's an effective plot device that shows the hero an important glimpse at what his future will be should he fail to put things right. In *Ocarina Of Time,* the effect is used just as evocatively as in the movie, spurring the player on to complete their quest and put things right. Indeed, paying a return visit to many of the familiar locations around Hyrule at this point kicks up a number of surprises for Link and the player. Lon Lon Ranch, the stables where Link finds and (once an adult) wins his trusty horse Epona, is now under new ownership. Walking through its tall gates expecting to find a friendly face, Link learns that its original proprietors, Talon and his daughter, have been mercilessly booted out of their home by Ganondorf, and ownership has now been handed to Talon's deceitful stablehand Ingo. This, and many other changes for the worse you learn about, which soon add mounting weight to the quest, as you see not only the important but also the personal effects of your actions.

With its numerous delays, an almost-switch of platform, and also in taking that sometimes tricky step up to 3D, it would be fair to say that *Ocarina Of Time* exceeded almost everybody's expectations at the time. Nintendo not only appeased longstanding fans of the franchise by delivering a brand new 3D *Zelda* game to surpass the lofty eminence of *A Link To The Past*, but also managed to attract a whole new audience to the franchise by delivering one of the greatest adventure games to ever see release. Garnering high acclaim and rave review scores across the board, and making history by scoring the first ever 40/40 in *Weekly Famitsu*, the only other game sequels to have ever had the same kind of impact are perhaps *Street Fighter II* and *Mario 64*.

If we want to be incredibly picky, we'd say that there are some weaker aspects of *Ocarina Of Time* that don't live up to the majesty displayed elsewhere, and which leave it looking and feeling fairly dated today. For example, at points it's not made explicitly clear where you should be going next in the game, and there are sections that only open up to you on the completion of some pretty stupid criteria – such as cleansing a room entirely of bats (which can sometimes mean that the odd wayward one can leave you stumped), or having two conversations with the same character in quick succession. Don't even get us started with the swimming mechanics, or the legendary frustration of its slow-motion Water Temple dungeon. However, its lush, beautiful 3D world, fluid controls, masterful storytelling, game design and incredible pacing make it as perfect a game as you could probably ever hope to play.

"An enchanting and perfect game world, which set an early benchmark for all 3D adventures that has still yet to be bettered in any meaningful way"

Favourite moments from Ocarina Of Time

Readers offer us a link to the past by recalling the Ocarina moment that has stayed with them more than any other

theantmesiter
Finishing it. I bought *Ocarina Of Time* on release day back in 1998 and it literally took me ten years to finish it. Looking back, it really was the greatest adventure I ever experienced in gaming. I aged along with Link and almost cried when it was over. And with that, I boxed up the game and haven't touched it since.

ShadowMan
Getting out of the Water Temple. Words cannot describe my joy and relief to finally finish that pain in the ass.

RetroMartin
Pulling out the Master Sword; classic scene, classic tune... and the ability to change from adult to kid!

Shinobi
When you first meet Zelda for the first time and she plays Epona's Song – the best piece of music ever! Also, the art gallery, and the Grim Reaper on the horse that came out of the paintings..

sscott
Walking out onto Hyrule field for the very first time and thinking, 'I can go anywhere I want!'

The Mask Seller
I've mentioned this before but when Link first leaves Kokiri Forest, the parting with Saria on the wooden rope bridge gets me every time. They're just children in the game but the parting is handled so well. It conveys a lot more emotion with its muddy textures, simple character models and purely text script then any FMV-enhanced epic I've played. I also love the bit when the Goron King rocks out to Saria's Song.

learnedrobb
Just one moment? There's no way I can manage it. I'll say the whole damn game!

StickHead
Got to be escaping Lon Lon Ranch on the back of Epona. I felt like Steve McQueen in *The Great Escape*.

mrmarvelxiii
It has to be the ending. No other game ending has touched me so deeply; the music, the gathering around the Lon Lon Ranch Bonfire and that final shot of young Link and Zelda meeting once again...

Budley Moore
Simply solving some of the fiendishly deceptive puzzles, kicking myself after spending hours and hours trying to solve them, only to realise it was something simple, like firing an arrow into the eye or such. A great game.

Reglan
When Link first encounters King Dodongo. I think my jaw hit the floor from being caught off guard by how massive that thing actually was. The ensuing battle is still one of my favorites.

Zapper
Beating the game without picking up any extra heart containers. The atmosphere is generally great in this game but this challenge I set for myself made me feel it a lot more. I had gotten a bit too used to the game after playing it so much, so this made it a lot more exciting.

Miketendo
I think the most important moment in *Ocarina Of Time* isn't just one moment, it's all the moments. That was one of the last games that I just could not put down until I finished it. I haven't had that feeling since *Ocarina*. The overall feeling of massive exploration was astonishing, and I think that's what ultimately sold me on the game in the first place.

FatTrucker
At the time it was released probably the standout moment for me was when you finished the first hour or so of godawful Nintendo™ handholding and 'practice', and suddenly had access to anywhere you wanted to go. It just seemed so suddenly unscripted and ripe for exploration as you walked out onto Hyrule field for the first time. It was probably the first step toward whats now known as 'sandbox' gaming, and it felt genuinely new and exciting at the time.

dste
I would say, for me, that out of the entire game my favourite moment would be when, after seven years, Link leaves the Temple of Time and you see how time and evil has destroyed Castle Town. Death Mountain sitting in the background with the light whirring around it just looks immense, and it just introduces the next part of the game so brilliantly.

boggyb68
The beginning; all I do in it is wander around the village throwing
rocks all over the place and making a silly whooping noise at the same time... it's marvellous!

That its influence and popularity can still be felt to this day is a mark of its impact and legacy. Having already been re-released twice before, first with *Ocarina Of Time: Master Quest* for GameCube in 2003 – a revision of the game featuring new puzzles and tougher dungeons to tackle – and then for Virtual Console, the game is once again thrust back into spotlight with a new remastered – and, dare we even say, definitive – edition for the 3DS. As well as rendering the Hyrule in stereoscopic 3D, *Ocarina Of Time 3D* has made subtle improvements to the gameplay, full use of the console's in-built touch-screen for item selection, and gyroscope technology to offer motion-controlled aiming. It also came packaged with both the original N64 and *Master Quest* editions of the game, as well as a brand new boss rush mode for fans to hone their Z-triggering skills with. In short it's a superb update of a classic game that highlights just how far ahead of the curve the original N64 classic was at the time.

Clearly proud of what it achieved with *Ocarina Of Time* – creating one of the most enchanting and perfect game worlds, and setting an early benchmark for all 3D adventures that has still yet to be bettered in any meaningful way – Nintendo is clearly hoping the 3DS will help encourage those who missed the game first time around to pick up and experience one of its most finest and accomplished videogames. The muddy Nintendo 64 visuals may have lost some their magic a decade on, but that's never been *Zelda*'s formula for success and it never will be. As we said at the start, the mark of whether a game is good or not is always judged by reflecting upon the journey it's taken you on. No game series on any format proves that better than *Zelda*, and few games, if any, offer a journey as magical, memorable and timeless as *Ocarina Of Time*. We'll be more than happy if the incoming release of *The Legend Of Zelda: Breath Of The Wild* on Wii U and NX is able to match the sheer brilliance and majesty of Links original 3D adventure.

» *Ocarina* features plenty of epic bosses, made more interesting by their imposing shapes filling the screen and clever attack patterns.

Developers celebrate Ocarina Of Time

Michael Romero

I remember being blown away by the whole Deku Tree dungeon. It had awesome puzzles, incredible atmosphere and it concluded with the creepy parasite-boss, Gohma. I was thinking, 'This game is already blowing me away, how much better can it get?' Then, I entered Hyrule Field. It then suddenly hit me, how big this world of Hyrule could be. I remember how excited I was, to know that there was so much more to see.

In the *Zelda* franchise, Nintendo continues to carry over all the successful elements of its past games to its new ones. Some people balk at that tactic, probably claiming that Nintendo is running out of ideas and/or just sticking with the winning formula. I think that is half true. It is sticking with the winning formula. It re-tells the same story in a different world, carries over similar designs, et cetera. I think players love the familiarity of the *Zelda* world with a new and refreshing take. We don't ever feel lost from what made *Zelda* great to begin with, and get to experience something new concurrently. I think it's brilliant.

On a developer stand-point, taking *Zelda* from 2D to 3D definitely takes the cake. It's directly comparable to the effect of *Mario 64*'s release. That game was nearly perfect and it set a whole new standard. Nintendo had to replicate that success. I've read a little technical documentary on some of the development challenges of *Ocarina Of Time*. They pushed that N64 hardware and did some very clever things to make its world amazing. As a programmer in the game industry, I'm in awe of the success it was able to achieve.

Eugene Jarvis

It always amazed me that anyone played the game. No gratuitous violence, zombie liquefaction, or body part explosions. What's the point?

John Romero

I actually never played *Ocarina Of Time* or *Majora's Mask*. I know, I know - epic fail. I know they were just amazing. I own them both and vow to play them some day.

Martyn Brown

I've long been a fan of *Zelda*, although my first real introduction was *Ocarina Of Time* on N64, which I completed prior to my first son being born in the late Nineties. I loved the game, especially the warm atmosphere and constant sense of wonder. One of my most abiding memories has to be of the Water Temple, but I'm not sure that would count as a best memory. I'm looking forward to playing it again on 3DS and also seeing both my sons enjoy the game too.

I think *Zelda* has such a rich appeal to so many and, due to the craft in the game, it's a series that everyone holds dear. Just the sounds are enough to stir emotions – and thats the way it should be.

Trip Hawkins

More than any game in history, the *Zelda* games delivered 'the epic hero's journey' a la Joseph Campbell. It does not get much better than rescuing a princess and the *Zelda* games combined mythic power with very solid game design.

Peter Molyneux

I played *Ocarina Of Time* when my son was a baby with him on my knee sleeping, as I played. In fact now he's 8, but he can still whistle the *Ocarina Of Time* theme song! The scale of the world, the pacing of the gameplay coupled with the balance which was perfectly tuned as you progressed through the vast world.

It's a vast world that feels real in its mythology and consistency. It's one of the few titles from Japan that has bridged to the West, and its character remains particularly consistent.

Jon Ritman

I was completely hooked on *Ocarina Of Time*, played from morning to night (one of the advantages of being a games programmer is that you can excuse such excess as research) until I finished it. I love the way the game just keeps adding layers yet you still return to previously played sections to find yet more there. As always, the game controls are fairly simple, so gameplay is pretty intuitive; this and the excellent camera code allow the player to become fully immersed in the amazing atmosphere. Personally, I can't wait for the next *Zelda* and I'm sure many of the games-playing public are with me on that one; it truly is a game series that can sell a console.

Dave Perry

My best memory of *Zelda* was hearing the audience go absolutely crazy when the first few notes were played at a Video Games Live concert. Of all the games (the biggest brands ever) *Zelda* got by far the biggest response. It's brand value is almost magical at this point; if we could look at Gamer DNA, we'd see a little green cap in there somewhere. It's definitely one of the brands I think will live on forever.

Jon Hare

I think that *Zelda*'s success lies in the fact that it was one of the first games to merge classic RPG-style gameplay with its trademark console style presentation and accessibility.

Julian Gollop

The *Zelda* games I have played are *Link's Awakening* and *Twilight Princess*. However, I do intend to get Ocarina of Time for the 3DS.

Ste Pickford

The first thing that pops into my head when you mention Ocarina of Time is seeing it running for the first time, while working on N64 development at Software Creations. Most of the N64 development team were squashed into one of the programmers' offices, watching in awe as it booted up for the first time, and we saw Link waking up in that tree-house room.

Then, there's the beautiful intro sequence with the horse riding across the plains. Magical! I loved the fact that you could ride around that very same area later in the game. The boss fight with the ghost guy on a horse who jumps out of the paintings on the walls – that was amazing and incredibly imaginative.

I was very impressed by the size of the outdoor sections – the fact that you could see hills in the distance and go and visit that area. The big field was very impressive, and the whole landscape had a real sense of being a coherant, physical place.

More than that though, and harder to explain, there was a kind of harmony between the disciplines of code, art, music, sound, and game design, which very few games manage to achieve. Everything slotted together perfectly. You never got the feeling the designer was trying to achieve something that the artists or coders couldn't achieve, or that anything was out of place. Even what could be thought of as technical weak points of the system, like the very low texture resolution, were turned into advantages by helping evoke a sense of mystery with slightly blurry locations. I have to say though, I thought *Majora's Mask* was better...

David Braben

My fondest memories of *Ocarina Of Time* on the N64 were perhaps of when you first get Epona the horse, and can ride across the plains at the hub of the game. It felt quite liberating.

It was a great game that took me a very long time to complete, and I think it is the best and most rounded of the *Zelda* games. *Wind Waker* is also good, but I found the boat sections got in the way a little.

Link has remained one of Nintendo's iconic characters, and a sequence of great, memorable games has helped cement the *Zelda* games into the games psyche along with *Mario*.

PILOTWINGS 64

Although Mario 64 was the game that effectively sold the N64 to the gaming masses, many Nintendo fans will tell you it was another launch title that had a more lasting impact. Damien McFerran takes to the skies with the definitive console flight simulation

IN THE KNOW

» **DEVELOPER:** NINTENDO/ PARADIGM SIMULATION

» **PUBLISHER:** NINTENDO

» **RELEASED:** 1996

» **SYSTEM:** NINTENDO 64

» **GENRE:** FLIGHT SIM

In recent years, Nintendo has made a habit of aligning itself with external studios in order to complete notable projects. We've seen fruitful unions with the likes of Sega (*F-Zero GX*), Capcom (*The Legend Of Zelda: Minish Cap*) and more recently Team Ninja (*Metroid: Other M*), illustrating that despite its lofty reputation within the industry, the modern Nintendo isn't afraid to look outside its own internal resources to get the job done.

However, back in the mid-Nineties this kind of policy was far less common, a fact which is evidenced by the intense sceptism that surrounded the development of *Pilotwings 64*. The 3D flight simulator – which followed on from the much-loved SNES original – was to be coded in collaboration with American 'visual technology' studio Paradigm Simulation, a company with no prior experience of producing videogames. It's little wonder that dedicated Nintendo fanboys were practically quaking in their boots.

A member of Nintendo's fabled 'Dream Team', Texas-based Paradigm wasn't created with interactive entertainment explicitly in mind. "The company was founded in 1990 by Ron Toupal, Mike Engeldinger and Wes Hoffman," explains Dave Gatchel – who acted as Paradigm's Project Manager on *Pilotwings 64*. "We focused on providing commercial products to assist graphics developers in creating simulation and training applications. We also produced and delivered 'turn-key' applications, such as flight simulators, human factors analysis simulations and 3D visualisation applications." The studio's work brought it to Nintendo's attention, although this interest manifested itself long before *Pilotwings 64* was on the drawing board.

"In 1994 we were approached by Nintendo regarding its new 64-bit console system" continues Dave. "At that time, Paradigm developed products based on the Silicon Graphics (SGI) line of workstations. Nintendo was looking for select companies with 3D graphics experience, and discovered us through their relationship with SGI. We were first approached by one of our close contacts at SGI to gauge our interest. Once we confirmed that we were interested in the opportunity, SGI set up a meeting with Mr Genyo Takeda, who was our primary contact at Nintendo.

Following that meeting, we started meeting regularly with SGI to study the architecture and work within a software emulator."

The two companies certainly made for an unusual pairing, but just as had been the case when Nintendo approached UK-based Argonaut Software to produce the Super FX chip for the SNES, it was clear that the Japanese giant was interested primarily in Paradigm's expertise in the realm of 3D – a world where Nintendo was still not 100 per cent confident. "At the time, it was clear that Nintendo's interest in us was due to our experience in 3D graphics," admits Dave. "We had very little experience developing games and no experience developing console games. Nintendo approached us knowing that we already understood most of the issues related to the 3D technology, and that they would need to help us understand the issues surrounding game design. Also, several of us had previous experience working with CGI during the integration of new hardware, which might have been perceived as an advantage."

However, before a single polygon was rendered in *Pilotwings 64*, Paradigm had to endure months of labour without even knowing for sure that it would be selected to continue working on Nintendo's latest machine. "Prior to starting on *Pilotwings 64*, the team was very small and focused on creating an engine within the N64 emulation system," says Dave. "This continued for approximately nine months, at which time we were notified that Nintendo had selected Paradigm as the developer that it would like to work with SGI to integrate the N64 hardware. We sent a team out to SGI for six weeks, consisting initially of four people: Mike Engeldinger (lead software), Wes Hoffman (lead art and visual effects), Mike Panoff (software), and me (project management), and later we brought out Aaron Hightower (audio)."

The next big task was to get some kind of tech demo running to display at the forthcoming 1995 E3 show, in order to demonstrate the clout of the upcoming console. "We decided to implement a helicopter application for the demo, so the team initially worked on getting this running on the software emulator," says Dave. "The custom graphics chips arrived later than expected, leaving ten days to get the application running on the actual hardware, so the final couple of weeks was particularly intense."

> **"We were actually quite a way into development before we knew it was going to be Pilotwings 64"**

This phase of development was characterised by testing, pushing the new hardware and finding out what it was capable of. "Following the integration effort at SGI and E3 1995, Nintendo started giving us a series of experiments to work on," reveals Dave. This research would eventually evolve into the game we know and love today. "We were actually quite a way into development before we knew it was going to be *Pilotwings 64*," comments Mike Engeldinger. "Nintendo suggested that we think of flying concepts without any mention of *Pilotwings*. We did prototypes of flying reptiles, island hopper helicopters, biplanes and the like." As these experiments dovetailed into something more and more grandiose, the truth was finally revealed to the surprised team. "After several months of this it let us know that we would be developing *Pilotwings 64*, with the goal of it being a launch title," says Dave.

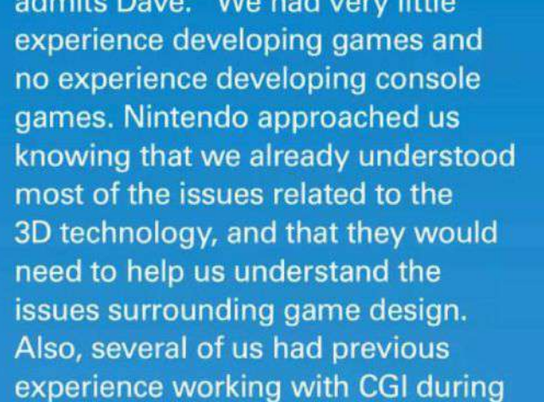
During development the duties were evenly split between the two firms; Nintendo handled the game design while Paradigm was responsible for the technology. Dave explains that they had little reason

DEVELOPER HIGHLIGHTS

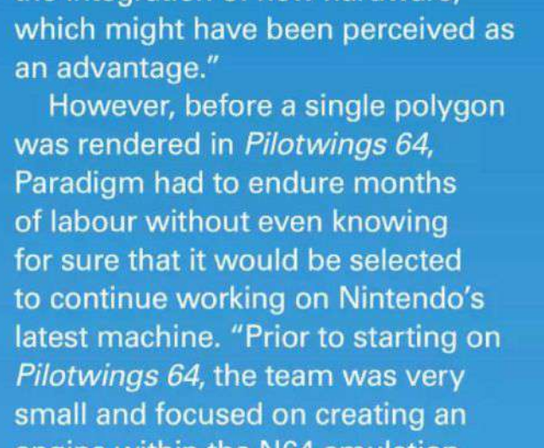
F1 WORLD GRAND PRIX
SYSTEM: N64
YEAR: 1998

SPY HUNTER
SYSTEM: PS2
YEAR: 2001

STUNTMAN: IGNITION (PICTURED)
SYSTEM: 360/PS3
YEAR: 2007



» Characters in the game were named after birds.



» Not all of the methods of flight in the game were mechanical; witness the glory of the Birdman Suit.

» These assets were apparently intended for Factor 5's Wii *Pilotwings* sequel

Nester's Quest

NESTER MAY NOT be a name which is familiar with British Nintendo fans, but in the US this goofy-looking character was something of a mascot for the popular magazine *Nintendo Power*. Created by one-time editor of the magazine and self-proclaimed President of the Nintendo Fun Club Howard Phillips, Nester even went on to star in a couple of games, the most infamous being *Nester's Funky Bowling* on the Virtual Boy. When *Pilotwings 64* launched many eagle-eyed players noticed the astonishing similarity between the character of Lark and Nester. *Nintendo Power* gleefully reported his true identity in its September 1996 issue, although members of the Paradigm team are regretfully clueless on the matter. "I can't confirm or deny that," says Mike Engeldinger when quizzed on the origins of Lark. "The characters came in very late in the game, and appeared like magic from sketches that we received from Nintendo one day; prior to that we had generic stand-ins for the pilots." It seems that for the time being, *Nintendo Power*'s assertion that Lark is Nester will have to stand. Nester has since been honoured by having a NES emulator named after him.

to complain with the balance of this relationship. "Since it was our first game, we had limited experience as game developers," he says. "Prior to *Pilotwings 64* our strength had been high-end 3D graphics, developing tools and applications for the simulation and training industry. As a result, we worked with the design staff from Nintendo. Our initial contact was Mr Takeda, who at the time managed Nintendo's R&D3 group and was in charge of the overall N64 development. On the design side, the lead designer was Makoto Wada, who was a member of Miyamoto's design group. During the production, we learned a great deal from working with Nintendo, not just about game design specifically, but also about producing games in general. The schedule was intense and the stakes were quite high for us, but overall it was a lot of fun."

"Once it became clear Nintendo was counting on us to deliver a launch title… there was some pressure"

One of the N64's biggest selling points was its analogue controller, which was incredibly innovative at the time. For Paradigm the pad was perfect for what it had in mind for *Pilotwings 64*. "Our background in visual simulation and vehicle modelling always involved using control sticks, and at the outset we simply designed our vehicles to fly using them," explains Engeldinger. "I don't think we even considered doing it any other way because there simply is no substitute for accurate control without one."

As the schedule became ever more demanding, Dave and his team were able to inject more influence into the creative side of the project. "Nintendo was leading the design effort; however, [it was] willing to consider suggestions from the team," explains Dave. "In some respects, since the schedule was so tight, it really became necessary for the design and production team to work collaboratively. What sticks out for me was the schedule; our goal was to be a launch title, and to achieve that it took an incredible effort from the entire team, really the entire company. During the last four to five months, it wasn't unusual for the majority of the team to work through most of the night. Everyone really extended themselves to the limit."

Unsurprisingly, the team began to feel the burn of this incredibly punishing development period. "Initially everything related to the industry was so new to us I honestly don't think we felt a great deal of pressure," says Dave. "Later, once it became clear that Nintendo was counting on us to deliver a launch title and it would only be *Mario 64* and *Pilotwings 64* at launch, there was some pressure." This wasn't helped when members of Paradigm's team were shown the game that would ultimately define the N64, and the one they would be launching *Pilotwings 64* alongside. "I remember about halfway through the development when we got a sneak peek at *Mario 64*," says Mike. "We were shocked at the gameplay

» This tech demo – codenamed *VX Vampire* – was one of Paradigm's early N64 experiments.

» [3DS] *Pilotwings Resort* on the 3DS faithfully captured the feel of the N64 version.

» That plucky plumber gets everywhere these days.

and production quality compared to where we were."

However, they needn't have worried. When *Pilotwings 64* hit store shelves the critical reception was overwhelmingly positive, and it went on to shift over a million copies. Dave admits he was somewhat taken aback by the reaction: "Frankly, it was shocking… It was gratifying at the time that it was so well received. Now, I'm just proud to be able to say I played some role in a product that people remember fondly. I'm very proud of the overall quality combined with being a launch title. Specific to the game, I think the team did a great job with the graphics, showcasing some of the platform's abilities."

Following the triumphant launch of *Pilotwings 64*, Paradigm Simulation was split into two firms – one of which was to concentrate on tech and the other on video game development. Paradigm Entertainment continued to develop for the N64, producing *Aero Fighters Assault* and assisting Video System with its popular *F1 World Grand Prix* racing titles, but strangely it never worked as intimately with Nintendo again.

"We continued to maintain a close relationship with Nintendo following the release of *Pilotwings 64*, though not as a first-party developer,"

» Genyo Takeda – seen here brandishing a GameCube – was Paradigm's main point of contact with Nintendo during development.

explains Dave. "From our standpoint, we wanted to grow the business and felt that working with numerous publishers and multiple platforms would help mitigate our business risk. At the time, development teams were small enough that we were able to run multiple productions, and it wasn't uncommon for us to work with as many as three publishers simultaneously." Although a sequel to *Pilotwings 64* was mooted in 1997 it never materialised. Sadly, the harsh realities of being an independent studio eventually caught up with the company. "We had a great run as an independent developer, producing some great games and operating profitably every quarter of our existence prior to selling the business," says Dave. "We elected to sell to Atari in 2000, at which point we were no longer entirely in control of our direction." Following a staff exodus, Atari offloaded the studio in 2006 to THQ, and in 2008 Paradigm closed its doors.

Despite the sad end to Paradigm's story, Dave has a surfeit of happy memories. "Working on *Pilotwings 64* was truly a great experience," he says with a grin. "Overall, Nintendo was one of the most professional and supportive organisations that I've had the pleasure of dealing with. [It] introduced us to game development, and [was] a great mentor on what it takes to produce great products and to survive in the industry." Engeldinger agrees. "It was a pleasure and an honour to work with such thoughtful and dedicated people. Although Mr Takada provided us with overall vision and core gaming principles – I recall his famous quote to us: 'the player must be king' – Mr Wada was the one that really shaped *Pilotwings 64* through very hard work and much personal sacrifice. Nintendo basically taught us the fundamentals of game development and the gaming industry, including the entire development process. Through *Pilotwings 64* we evolved from a boutique application developer to a mainstream game developer; this would not have been remotely possible without the patience and guidance of Nintendo."

Special thanks to Greg Noe for providing the screenshots used to illustrate this feature.

The future of Pilotwings

DESPITE THE SUCCESS of the SNES and N64 editions of *Pilotwings*, the series has been in limbo for many years now. An N64 sequel was confirmed in 1997 but then vanished without trace. In 2003 it was rumoured that Factor 5 – the studio behind the popular *Star Wars Rogue Squadron* series – was busying itself on a GameCube update of the series. Development was supposedly shifted to the Wii when it launched a few years later, and apparently the title was completed on the platform. However, Nintendo refused to publish the game and with Factor 5's unfortunate closure, it's looking very unlikely that it will ever see the light of day – if indeed it even exists. In 2011 Nintendo released *Pilotwings Resort* for the 3DS. Despite excellent use of 3D, it failed to sell and any sort of sequel looks very unlikely.

CLASSIC MOMENTS

F-ZERO X

» **PLATFORM:** NINTENDO 64 » **DEVELOPER:** NINTENDO EAD » **RELEASED:** 1998

Twenty-nine machines surround you on the starting grid. Boost control is locked, unable to be used until the second lap. The floating scoreboard counts down. 3… 2… 1… GO! Fight your way to the front of the field by the end of three laps, tackling jumps and loops, hitting dash plates then recharging your energy in the pit zones.

The back of the box promised "high velocity, white knuckle, racing exhilaration" and Nintendo EAD delivered. Thirty new courses are filled with surprises, all running at a constant 60 frames per second. The AI offered plenty of competition – enemy vehicles collide, bump and spin out, exploding when they run out of energy. As you play through GP Mode, you will see machines labelled as your Rival – giving more incentive to beat them. Comparisons to *WipEout* are inevitable, but *F-Zero X* remains a thrilling racer. ✱

BIO

After the SNES original and this N64 sequel, the *F-Zero X Expansion Kit* for the 64DD add-on was exclusive to Japan. Its track editor was based on development tools EAD had used. *Maximum Velocity* for Game Boy Advance used a Mode 7 style engine. Sega's Amusement Vision team developed *F-Zero GX* (GameCube) alongside arcade version *F-Zero AX*. *GP Legend* (GBA) was based on the anime series. *F-Zero Climax* (GBA) was also exclusive to Japan, letting users edit and share courses.

MORE CLASSIC F-ZERO X MOMENTS

FOUR TO THE FLOOR

Split-screen allows up to four players (or two players plus computer-controlled opponents) to compete on any unlocked track. Points are earned for each race with the game keeping a running tally. The VS Handicap reduces the amount of energy boost uses up, making it slightly easier.

TO THE DEATH

Death Mode is for a solo player competing with 29 computer racers on a simple track layout. The aim is to eliminate the other vehicles and be the last one standing. The player will need to use the side and spin attacks, taking advantage of the walls and gaps to deplete energy from the others. A star is earned for each vehicle you manage to eliminate.

WINNING IS EVERYTHING

GP Mode is played over three difficulty levels and three different Cups of six tracks. The difficulty level determines how many spare machines the player has. Falling off the course, running out of energy or selecting Retry will each cost a machine. Points are awarded for the finishing position.

SHOWING CHARACTER

Six different machines are initially available, each rated based on their body strength, boost strength and grip. The balance between acceleration and top speed can be adjusted. Extra machines (and their pilots) can be unlocked by winning Cups. The Joker Cup and X Cup can also be unlocked, along with the Master difficulty level.

Minority Report

CLASSIC GAMES YOU'VE NEVER PLAYED

NINTENDO 64

The N64's technical uniqueness means that lots of its third-party games are exclusive and even the multiplatform ones can be drastically different. Join Nick Thorpe for a look at some lesser-known examples...

» You'll be no stranger to the odd giant leap by the time *Beetle Adventure Racing* is over.

» Gems are fuel for your cards. You can use them when they are greyed out, but it depletes your energy bar.

BEETLE ADVENTURE RACING

■ DEVELOPER: PARADIGM ENTERTAINMENT ■ YEAR: 1999

■ In any reasonable world, there's no way that *Beetle Adventure Racing* should be a good game. After all, everyone knows that licensed games were rubbish and Hitler was an awful human being – yet here we are, preparing to sing the praises of a game designed to promote one of approximately two acceptable things ever to emerge from Nazi Germany (the other being Fanta, if you were wondering). Clearly, this is no reasonable world.

Beetle Adventure Racing isn't just a good game, it's a great game and it's a real shame that more people aren't aware of it. In *Beetle Adventure Racing*, you can drive any car you like as long as it's a Volkswagen Beetle. Well, unless you're in Australia, in which case you'll be driving an HSV Commodore instead – but we digress. The real star of the game isn't the vehicle, but the tracks you drive it on. There's a wide variety of locations to visit as you'll speed around six varied tracks from frozen wastelands to dinosaur-friendly volcanic parks. However, the real reason that the game truly lives up to the 'Adventure Racing' billing is the wealth of routes on offer. Each track offers up to ten places to diverge from the circuit, with both shortcuts and lengthier routes on offer.

The main reason to go exploring is to find bonus crates, which can significantly aid you in your pursuit of a championship. Some crates give helpful nitro boosts, aiding you in the present race, but the vast majority offer points. Depending on the difficulty level, you'll need to find 50-65 points in order to earn a continue, and if you can find all 100 in a single race you'll unlock an extra arena for the multiplayer Beetle Battle mode. However, you can also use shortcuts to simply get around faster. There's still not an awful lot out there that's similar to *Beetle Adventure Racing* in this regard, and the exploration gameplay can even broaden the appeal to gamers that don't traditionally enjoy racers.

The Beetle Battle mode also carries on the collection theme, as you'll need to collect a selection of coloured ladybirds before making your way to the exit. To complicate

matters, not only does everyone else have the same idea, but you're all able to arm yourselves with rockets, bombs, screen-flipping items and all sorts of other nefarious things. It's not as deep as the main game's exploratory racing, but with the N64's four control ports it should prove to be a hit at any multiplayer party.

If you're wondering quite how a seemingly throwaway licensed game could turn out so well, the answer can be found in the development team. Paradigm Entertainment had worked on the N64 from the beginning, producing *Pilotwings 64* before beginning their racing legacy with the acclaimed *F-1 World Grand Prix*. With a heritage like that and a price point of less than £10 for a loose cartridge, it'd be a unreasonable world in which you didn't try *Beetle Adventure Racing* to see why we think so much of it.

IN DEPTH

CRATE ESCAPE

■ Finding and smashing crates is essential in *Beetle Adventure Racing* in order to obtain points. Some are roadside obstacles, but many are in hidden routes.

RAINBOW ROADSTERS

■ Though you're limited to Beetles and nothing else, cars with stats can be identified by their paint – now where are our 'Go-Faster' stripes?

TOURIST TRAP

■ There are many alternate routes to find on each course, but beware – they're not always shortcuts, and some can prove more difficult to navigate than the track itself.

HAZARD LIGHTS

■ Our colourful little cars are subject to many perils on their adventures, including open water and deadly lava flows. Makes you think more of *Mario Kart* than Volkswagen, right?

» Hidden paths and back alleys often provide valuable crates filled with lovely points.

IF YOU LIKE THIS TRY...

SONIC R

SATURN

■ This racing spin-off hits a lot of the same notes as *Beetle Adventure Racing*, thanks to its canny combination of platforming and racing. You'll need to finish in pole position to get anywhere, but each of its five tracks will satisfy explorers thanks to a wealth of hidden collectibles and alternate routes.

GTI CLUB

ARCADE

■ With its diminutive cars and cities that offer a multitude of possible routes, *GTI Club* is something of a spiritual predecessor to *Beetle Adventure Racing*. However, while it's great for the occational blast of fun, being an arcade game it doesn't encourage exploration in anywhere near the same way.

DIDDY KONG RACING

NINTENDO 64

■ Although it goes about doing so very differently, *Diddy Kong Racing* is like *Beetle Adventure Racing* in that it tries to break the mould of what a racing game is. The adventure mode pits you against bosses, and you'll find yourself piloting planes and hovercrafts as well as driving an ordinary kart.

Minority Report

OPERATION: WINBACK

■ DEVELOPER: KOEI ■ YEAR: 1999

■ Those pesky terrorists, the Crying Lions, have managed to hijack an incredibly sophisticated piece of weaponry, a orbital laser. The Special Covert Action Team is called in to fix the whole botch, but their helicopter gets shot down on the way into the complex housing the weapon's controls. Now it's up to our protagonist Jean-Luc Cougar to rescue his captured comrades, stop the Crying Lions and restore safety to the world.

Back in 1999, you'd have been hard-pressed to find a magazine that wasn't calling *Operation: Winback* 'the N64's *Metal Gear Solid*' – but that's a label that does a disservice to the game. While Konami's classic often offered non-lethal solutions to situations, in most cases you're going to have to shoot some baddies to make it through Koei's game. Gunplay is so integral to the game that your pistol has unlimited ammo, and you also come equipped with an assault rifle and a shotgun. However, Jean-Luc is a fragile chap and is heavily outnumbered, so if you wander out into the open you'll be shot to Swiss cheese. As a result, making effective use of cover is an essential survival skill – and in this regard, it's better to think of *Operation: Winback* as a precursor to modern cover shooters like *Gears Of War*.

It's easy to see that *Operation: Winback*'s failing is the complexity of its controls. Diving behind a box and popping out to shoot a bad guy is a five-button process, whereas later games would simplify the process enormously. Still, if you can adjust to the controls, *Operation: Winback* offers some very enjoyable stages and two endings for players to see.

» Low health, Jean-Luc crouched behind cover and a baddie in the distance? Typical *Winback* scenario, that.

» "Right, so it's A to get in cover, C-Down to target, R to jump out and pull the gun and… hang on, what do I press to shoot?"

» At a distance, a shotgun blast is useless. Up close, it's lethal every time – but you rarely want to get in the enemy's face.

MORE GAMES TO PLAY

» FIGHTERS DESTINY

■ DEVELOPER: GENKI
■ YEAR: 1998

■ This one-on-one brawler doesn't pretend that all victories are equal – a cheap ring out or judge's decision will only earn one point of the seven needed to win a match, while a successful throw will earn two and a knockdown will earn three. As some hits win points on their own, a canny fighter is always able to mount a comeback. The fighters are generic and their movements stiff, but this is an interesting alternative fighter.

» MISCHIEF MAKERS

■ DEVELOPER: TREASURE
■ YEAR: 1997

■ The least famous of Treasure's N64 outings was given some shockingly low review scores upon its release, causing many players to avoid it. However, it's one of the best 2D platformers on the system – the game's signature grab-and-shake mechanic is unique, and, as expected from Treasure, it's rammed with ideas. It's short and the pre-rendered visuals are no longer in vogue, but it's worth a look if you missed it.

» DESTRUCTION DERBY 64

■ DEVELOPER: LOOKING GLASS STUDIOS
■ YEAR: 1999

■ While many players will remember *WipEout 64*, Psygnosis' PlayStation racer also found its way to the N64. It's not quite the same experience, as car damage doesn't affect your handling and the carnage never reaches the levels of *Destruction Derby 2*, but this is a worthwhile racer – particularly as it introduces the series' excellent Bomb Tag battles, or 'Pass Da Bomb' in later games.

» POKÉMON PUZZLE LEAGUE

■ DEVELOPER: NINTENDO SOFTWARE TECHNOLOGY
■ YEAR: 2002

■ Don't be put off by the game's cutesy exterior – this is an excellent update of *Panel De Pon/Tetris Attack*. As well as adding high-level AI for expert players, *Pokémon Puzzle League* adds a 3D mode in which the flat playfield is replaced with a cylindrical equivalent. The production values are also high for what might seem like a throwaway spin-off.

ROCKET: ROBOT ON WHEELS

■ DEVELOPER: SUCKER PUNCH PRODUCTIONS ■ YEAR: 1999

■ N64 owners were spoiled for choice when it came to 3D platformers, which meant that strong efforts like *Rocket: Robot On Wheels* got lost in the shuffle and received rather less attention than they might have done elsewhere. That's a shame, because this is an interesting and varied game. Dr Gavin has left Rocket in charge of Whoopie and Jojo, the mascots of his theme park Whoopie World. Unfortunately, Jojo is a jerk and knocks out Rocket, before kidnapping Whoopie and stealing the park's tickets and tokens. Needless to say, it's your job to help Rocket get them all back.

What this involves is a series of puzzle challenges, as well as a variety of mini-games and some vehicular fun. There's a keen sense of humour in play, as one of the early mini-games requires you to cheat at a game of noughts and crosses by lobbing things at your opponent. However, the distinguishing feature of the game is its physics model, which simulates a variety of real-world attributes including mass and acceleration. It's not a fast-paced game, but it's very rewarding.

Thankfully for Sucker Punch, its other games, such as *Infamous,* have gone on to achieve success, but its debut is also a hidden gem.

» These clowns aren't dangerous, but they have an irritating habit of stealing things you're carrying.

» How many other games let you climb up a self-made staircase of sheep? Not many, we reckon.

"There's a keen sense of humour in play, as one of the early mini-games requires you to cheat at a game of noughts and crosses"

RETRO SUNKER

»GASP!! FIGHTERS NEXTREAM

■ DEVELOPER: KONAMI ■ YEAR: 1998

■ This brawler contains a character creation mode, and that's the only interesting thing about it. It looks awful and plays as if the developers had never seen a fighting game before.

» BATTLETANX: GLOBAL ASSAULT

■ DEVELOPER: 3DO
■ YEAR: 1999

■ The original *BattleTanx* was forgettable, but 3DO delivered a much-improved sequel here. Given that tanks aren't considered to be speedy vehicles, *BattleTanx: Global Assault* is a surprisingly fast-paced shoot-'em-up. The game's missions are varied and interesting, requiring you to think strategically by seeking cover and prioritising targets as well as exercising your trigger finger.

» OGRE BATTLE 64: PERSON OF LORDLY CALIBER

■ DEVELOPER: QUEST
■ YEAR: 1999

■ This was originally an import-exclusive, but finally hit Europe via the Virtual Console in 2010. If you're a fan of SRPGs, this is one of the few options available to you on the N64. Gameplay is focused on strategic deployment and formation rather than micromanaging battles, and capturing bases is of the utmost importance.

» GLOVER

■ DEVELOPER: BLITZ GAMES
■ YEAR: 1998

■ A disembodied glove probably doesn't seem like an obvious choice for a videogame hero, and, truth be told, we were a little sceptical when we first came across *Glover.* However, the challenge of navigating a ball around the game's varied and attractive 3D environments is certainly an interesting one. What's more, the N64 is definitely the platform to play it on – there's a PlayStation version but it wasn't nearly as good.

» BODY HARVEST

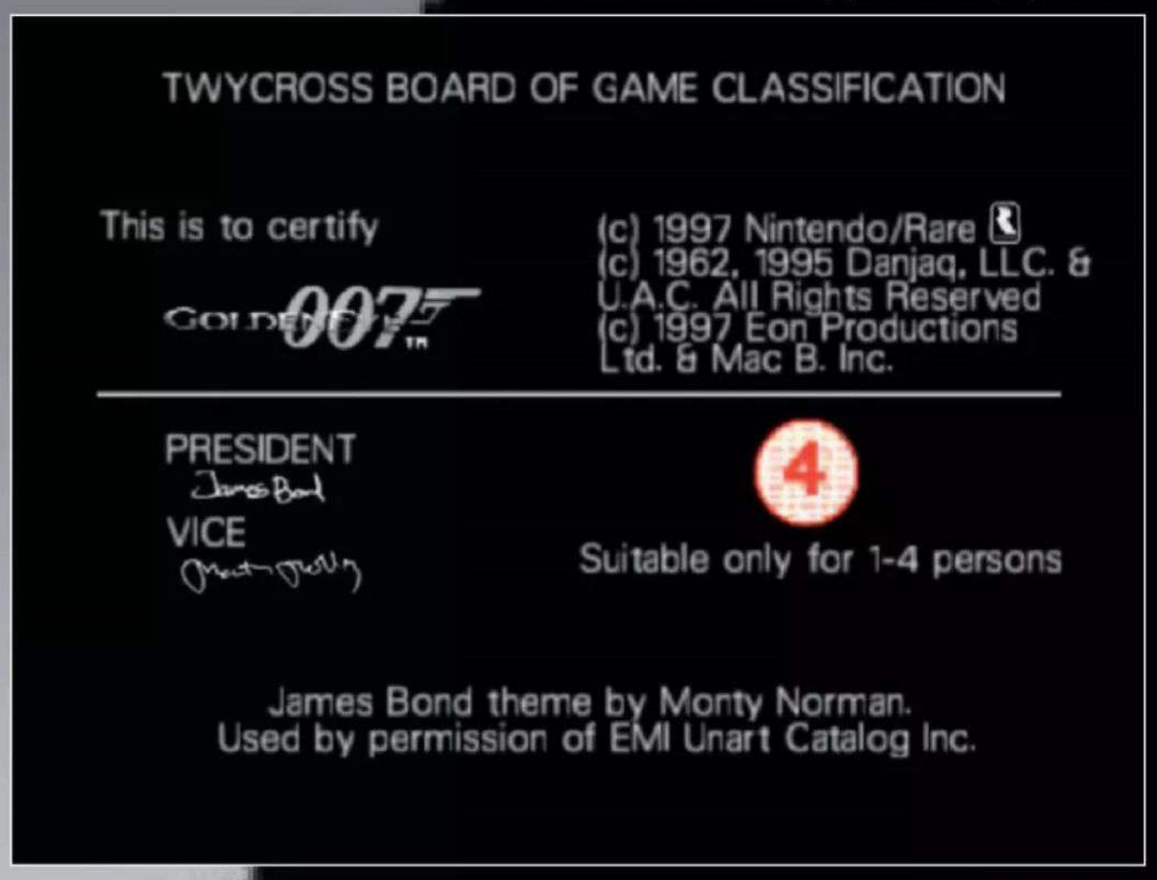
■ DEVELOPER: DMA DESIGN
■ YEAR: 1998

■ Run around a 3D environment, hopping in and out of vehicles as you see fit and gunning down enemies. No, it's not *Grand Theft Auto* – it's just made by the same people. While this early effort from DMA features familiar open world mechanics, the plotline that sees you gunning down an alien army in a variety of time periods is a world away from the urban landscapes that would become the developer's signature.

GOLDENEYE

20 years ago, first-person shooters were for PC gamers and Rare made very pretty platformers. Then GoldenEye came along and changed everything. We gather together four of the original development team – Dave Doak, Steve Ellis, Karl Hilton and Graeme Norgate – to tell us how they turned a film licence for a mysterious new console into the definitive console FPS. Paul Drury plugs in the joypads…

» Proof of the amount of work the boys put into *GoldenEye*'s presentation.


TWYCROSS BOARD OF GAME CLASSIFICATION
This is to certify
GOLDENEYE 007
(c) 1997 Nintendo/Rare
(c) 1962, 1995 Danjaq, LLC. & U.A.C. All Rights Reserved
(c) 1997 Eon Productions Ltd. & Mac B. Inc.
PRESIDENT
James Bond
VICE
4
Suitable only for 1-4 persons
James Bond theme by Monty Norman.
Used by permission of EMI Unart Catalog Inc.

Pub bores the world over be silenced. We know who the best Bond is. It's Roger Moore. Wait, come back. We have empirical evidence.

"Right near the end of development", explains Dave Doak, "a guy came in from EON who owned the Bond licence and saw we had put in Connery, Dalton and Moore as well as Brosnan. We thought it would be great for marketing and even some screenshots went out with Connery in his white tuxedo. Then an edict came down from on high and we had to get rid of the other Bonds, so on the day we had to take them out we played this epic deathmatch – first to a hundred kills – which went on for about three hours. Mark Edmonds played as Moore and won by one kill. It went down to the wire..."

GoldenEye's enthralling multiplayer shootouts were thus denied an intriguing proposition. But then the game was never conceived as a four-player grudge match. In fact, it wasn't even conceived as an FPS at all in the beginning. Karl Hilton recalls the first mooting of the project: "I started at Rare in October 1994 and they had me modelling cars and weapons to see if I could do it for no particular game. Martin Hollis wandered in – he tended to float around – and said he was leading a team to do a *Bond* game. I'd been highlighted as someone who might be interested and of course I was, but in the back of my mind I was thinking, Oh God, a film licence. The previous ones had been 2D *Robocop* or *Batman* games and they were generally awful. It seemed a risky project."

"THE FIRST THING I DID WAS MODEL THE GAS PLANT. YOU COULD FOLLOW A ROUTE THROUGH THE LEVEL LIKE IN VIRTUA COP. THEN WE DECIDED TO TAKE IT OFF THE RAILS" KARL HILTON

IN THE KNOW

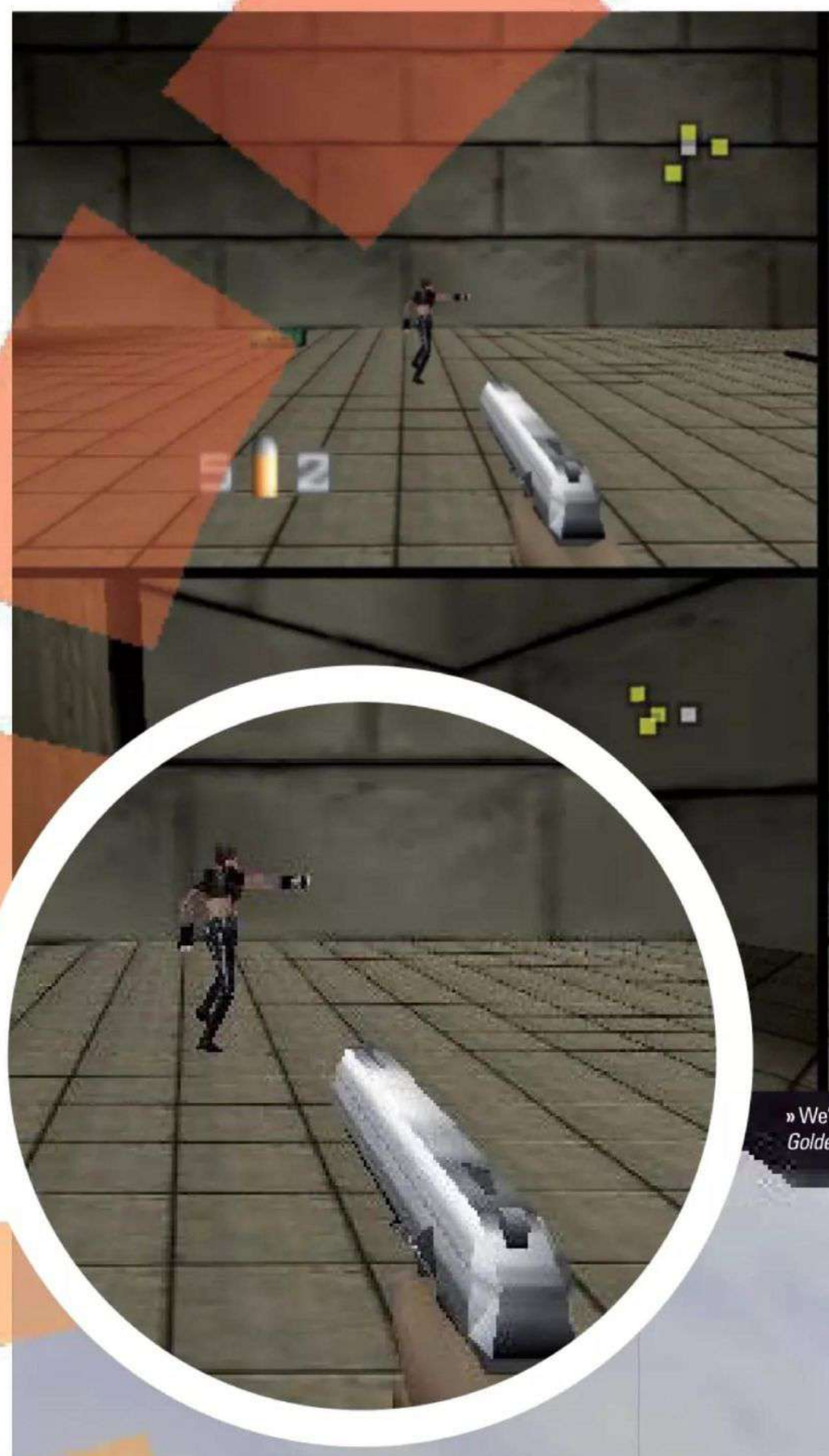
» **PUBLISHER:** NINTENDO
» **DEVELOPER:** RARE
» **RELEASED:** 1997
» **SYSTEM:** NINTENDO 64
» **GENRE:** FIRST PERSON SHOOTER

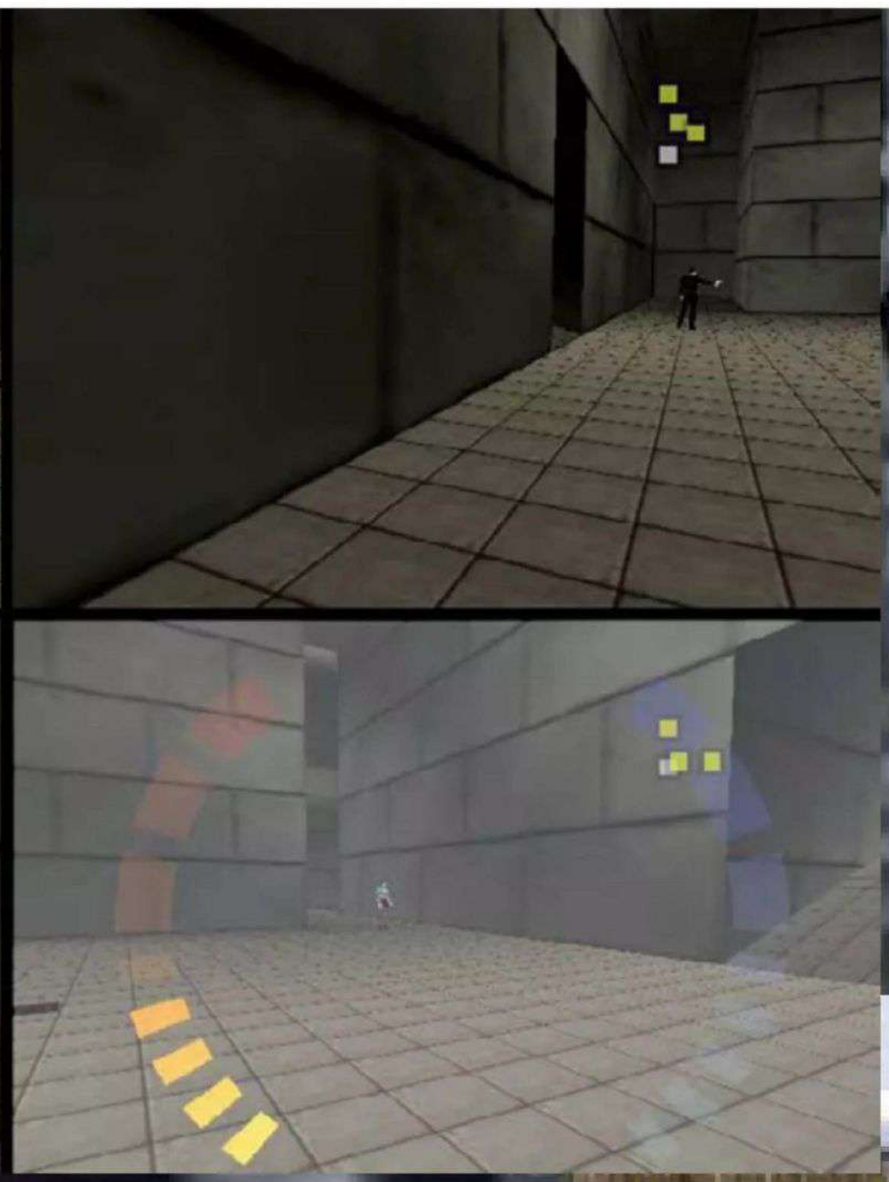
DEVELOPER HIGHLIGHTS

TIMESPLITTERS
SYSTEMS: PS2
YEAR: 2000

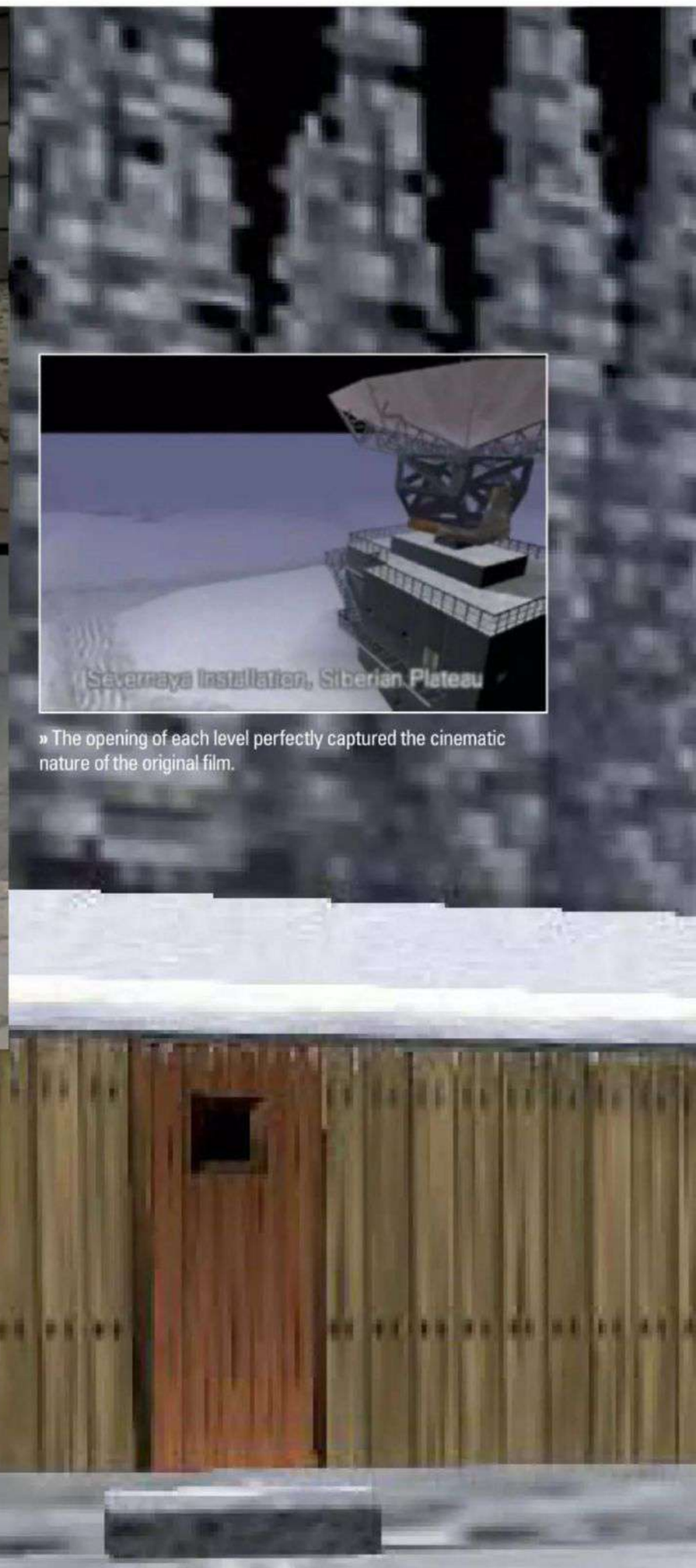
SECOND SIGHT
SYSTEMS: PS2, XBOX, GAMECUBE, PC
YEAR: 2004

HAZE
SYSTEMS: PS3, 360, PC
YEAR: DUE 2007





» We've lost count of the many hours we've spent playing *GoldenEye*'s superb multiplayer.



» The opening of each level perfectly captured the cinematic nature of the original film.

PLAY AND LEARN CHRIS

"We didn't know whether multiplayer was technically possible", admits Steve. "It was an experiment that didn't begin until May… and the game came out in August! I trawled through the code to find anything that referred to the player and made it work for more than one. I got it going for two first and then frame rates meant it couldn't work for all levels. Karl went off and built the Complex and Temple and had strict instructions not to put more than so many polygons and textures on screen. Then it was just a case of playing it.'

Graeme: "I first saw it as four-player split screen and said, 'Wow Martin, you've got multiplayer!' He was, 'Oh no, no, you didn't see that, it's a complete secret…' The concern was that half the coding team was being allocated to some frivolous thing that might not work. The Stampers had actually said, no multiplayer. Chris Stamper wondered that if you had four view ports on screen so you could see what others were doing, how could it possibly be fun?!'

Initially, the intention was to do a 2D side-scrolling platformer for the SNES, a genre that Rare excelled in after the seminal *Donkey Kong Country*, but Hollis insisted the game should be in 3D and produced for Nintendo's enigmatic Ultra 64, which was still in development. He also made explicit his design model: Sega's lightgun arcade hit *Virtua Cop*.

Karl: "When I got involved, the first thing I did was model the gas plant. We put a spline (sic) through the level so you could follow a route like in *Virtua Cop*, but it didn't go further than that.

"'GOLDENEYE'S NOT YOUR UNIVERSITY PROJECT' TIM STAMPER TOLD US ONE DAY! AS HEADS OF RARE, THE STAMPERS PROBABLY HAD TO MAKE A LOT OF EXCUSES" STEVE ELLIS ON WHY THE GAME APPEARED TWO YEARS AFTER THE FILM

We decided to take it off the rails. Some of those early builds had bits missing because you'd never be able to see them and I remember going back and filling in the holes."

GoldenEye was forging its own path, a departure from the Rare games that had gone before. When you consider that this was the first project for eight of the nine team members, that was perhaps to be expected. They may have been inexperienced, but they were unfettered by expectations of what a game could and couldn't be. They turned naivety into ambition and the enforced isolation of this happy band – "Rare organised teams into separate barns and you only had keys to your particular cell block", quips Dave – meant that the newbies on the team had to find their own way.

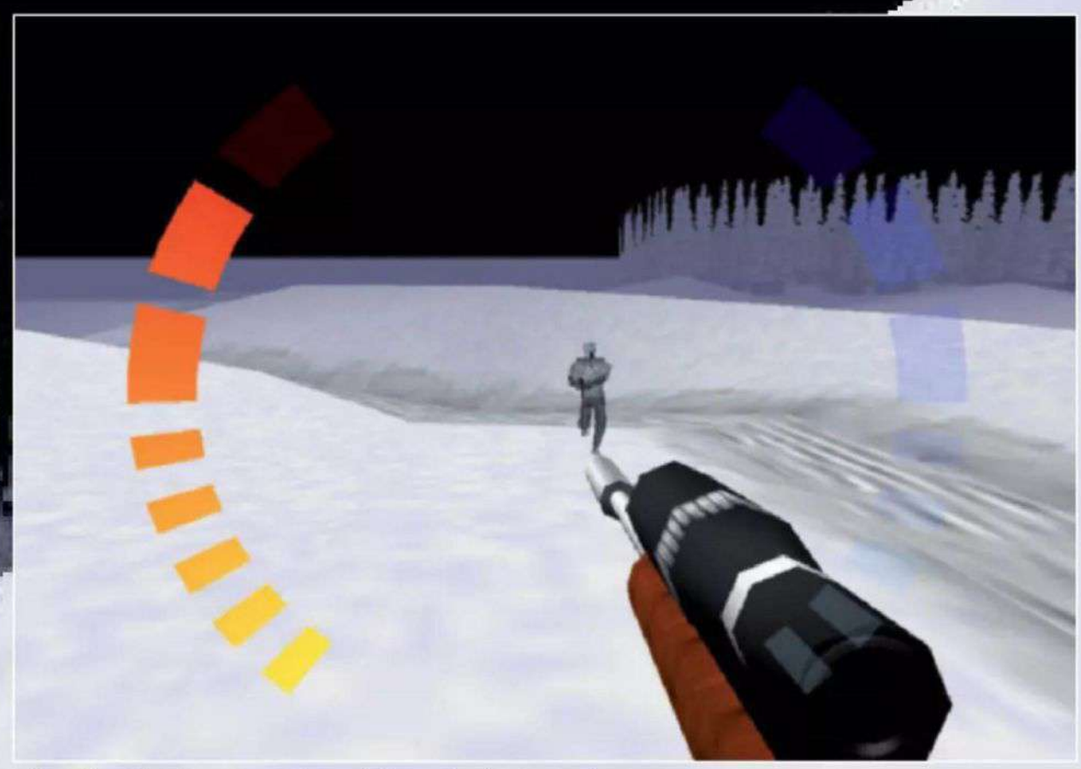
"Because it was most people's first game", explains Graeme Norgate, "we did things we might not do again because it was too much work. We didn't take the easy route. If something sounded like a good idea, it was like, 'Yeah let's do it!' The world was our oyster! Only afterwards would you find it was a world of pain."

At least it was a world of their own making. "It was untrammelled by arseholes", explains Dave. "Nowadays, publishers get people who don't know about games to run projects. We hadn't worked on a game before but the difference was we were having to do the work. Our wish-list of features would be things we knew would be good and we could do. There was some smart hiring and cherry-picking of people. We all had ambition and were hardworking. That's how he managed to get that much content out of us."

Martin also encouraged the team to draw on their love of the *Bond* films they'd grown up with. He recognised the inherent appeal of playing as the suave hero who had defined cool for so many aspiring young agents over the preceding decades. No longer would you simply be a floating gun as in *Doom*. Now you were England's deadliest weapon.

Karl: "I remember the first time we got Bond's hand in with the watch. We

» Limited shooting and careful movement enabled you to make your way stealthily through many levels.



» The sniper rifle, a joy to use and essential for getting the drop on the enemy.

scanned it in and modelled it up and it had the cuff of the white tuxedo. I thought, hey, I'm James Bond! And then we put that thing in where the camera flies into the back of Bond's head at the start of a level. It tied you in."

A key part of that appeal was the infamous Licence to Kill. *GoldenEye* was a first-person shooter of course, but the decision to recognise body-specific hits introduced a new subtlety to the genre. Shoot a guard in the leg and he reacts differently to if you blasted him in the chest. Each part of the body was given a weighting, expressed as a fraction. Hit a limb or the torso and your enemy would be pushed closer to a damage count of one and death. Or you could go straight for the head. A bullet in the brain equalled one. Instant death. One-shot kills.

Headshots were not only disturbingly satisfying though. They created a whole new way to play. Dave explains: "The way detection worked was very simple but fundamentally changed the set-up. Whenever you fired a gun, it had a radius test and alerted the non-player characters within that radius. If you fired the same gun again within a certain amount of time, it did a larger radius test and I think there was a third even larger radius after that. It meant if you found one guy and shot him in the head and then didn't fire again, the timer would reset. It wasn't realistic but it meant the less you shot, the quieter you were, the less enemies came after you. If an NPC that hadn't been drawn and was just standing in a room waiting was alerted by gunfire, it would duplicate itself and one went to investigate. You can see it happening sometimes – if you go to the right place and make a noise, you see more enemies spawning."

Stay hidden, keep quiet, make every shot count… almost inadvertently, the team had invented stealth gaming. Of course you could still go in all guns blazing, but once players got to grips with the sniper rifle and realised that enemies had distinct blind spots to exploit – they could only 'see' you if they could walk to you in a straight line, meaning you could peer out from behind cover or line up a fatal headshot through windows – the sneaky approach was not only appealing, it was vital in successfully completing many of the game's trickier missions. It was a surreptitious tactic that emerged naturally, rather than being pre-determined.

Karl: "When we had plenty of film material, we tried to stick to it for authenticity but we weren't afraid of adding to it to help the game design. It was very organic. Dave would come in and say he needed an extra door and a room somewhere and we'd add it in. Back then, it was so much quicker. It'd be half a day's work to add in a new corridor and a room."

This sense of freedom to try new things, to experiment with level design, play it exhaustively and let the experience determine what direction development would go was crucial to how the team worked. They weren't enslaved to a rigid design document, meaning everyone could contribute to game design. Nothing was set in stone. Not even the hardware.

Considering how the finished *GoldenEye* feels so suited to the N64, it's easy to forget the machine didn't exist for the first year and a half of its development. The team was using SGI Onyxs, hugely expensive Silicon Graphics machines, guessing at what the specs of Nintendo's new console might be and using a butchered Saturn controller to playtest. As it turned out, when they finally received the finished console they were pleasantly relieved. Despite costing a fraction of the SG workstations, fortunately Nintendo had come good on most of its promises. "The processor ended up being three quarters of what they had told us", explains Steve. "We had to cut the textures down by half."

M SPEAKS

We managed to catch a word with the man responsible for overseeing the *GoldenEye* project, Martin Hollis. So, having assembled his team, were they a handful to manage? "That's a cheeky question", replies Martin, "and I like it. I'm not a terribly dictatorial manager. Oh they were fabulous because we all fitted together so well. We did have a shared vision, which happened naturally and everyone knew what *Bond* was about which helped us to get there. So no, they weren't difficult to manage. Now if you asked my management about me, they might tell a different story…"

Martin continued to lead the team as they began work on *Perfect Dark*, but left Rare in 1998 to set up his own company, Zoonami. Visit its website www.zoonami.com for a transcript of the fascinating speech he gave at the European Developers Forum in 2004 on the making of *GoldenEye* plus details of the company's recently released game, *Zendoku*. "Think Sudoku meets ninjas", he says helpfully. Martin's favourite Bond girl is Jane Seymour and he assures us he could have triumphed over his former colleagues if he'd been part of the developer deathmatch and we've convinced him to be a future castaway for *Desert Island Discs*. Result.

FREE AT LAST

While *GoldenEye* was instrumental in popularising the console FPS and introduced a myriad of new ideas to the genre, the game has a very tangible legacy to those that worked on it. Steve: "Free Radical Design was set up on the back of *GoldenEye*. It led us to signing a deal in the first place. It opened doors for us to do what we've gone on to do." FRD has gone on to become a major creative force in FPS development, producing the *TimeSplitters* series and currently working on *Haze* for PS3 due out later this year. Success has seen the Nottingham-based company grow enormously and with 160 employees and relationships with publishers such as EA, Ubisoft and LucasArts, have the boys ever considered going back to *Bond*? Karl: "It's been suggested at times by people, but publishers have to pay so much for the *Bond* licence it puts them off. Actually, it would be good to do *GoldenEye* again with new technology and do things we wanted to first time." Before we all get too excited though, he adds: "If FRD did a *Bond* game I'm sure it would be good, but there's no GoldenEye magic dust you can sprinkle on."

Unfortunate, but not a disaster. And they coped with the reduction in admirable retro fashion. "A lot of *GoldenEye* is in black and white", admits Karl, rather surprisingly. "RGB colour textures cost a lot more in terms of processing power. You could do double the resolution if you used greyscale, so a lot was done like that. If I needed a bit of colour, I'd add it in the vertex."

As their semi-colourful *Bond* world was taking shape on the small screen, the film it was based on was nearing completion. The team had received the script very early in development and visited the set at Leavesden Studios, housed in an old Rolls Royce factory, half a dozen times. "We had really good access", says Karl. "We could walk anywhere and photograph what we needed. After the first few visits, I realised we needed textures. I started taking photos of walls!"

Visiting the filmset undoubtedly helped cement the game world in the minds of the team, but it also reminded Rare that the clock was ticking. While trying to release the game in tandem with the film had never been considered a viable proposition, the thought of it not appearing until the next *Bond* movie hit cinemas instilled an understandable sense of urgency.

Steve: "'It's not your university project' Tim Stamper told us one day! As heads of Rare, the Stampers probably had to make a lot of excuses. That's what we have to do these days. Why isn't it out yet? Why is it crap? We never had to answer those!"

Perhaps the Stamper Brothers' greatest contribution to *GoldenEye* was fending off such enquiries and allowing the team time to develop a 3D game in what were still uncharted waters. Being able to play *Mario 64* on the new console was a key influence.

Dave: "When *Mario* arrived it was clearly a step forward. Martin was obsessed with the collision detection, which was obviously doing it in 3D and *GoldenEye* was essentially using a 2D method. And our story was only about shooting stuff – we needed other things. We started putting in objectives, like meeting people in a level and back then that involved some complicated AI. Finding Boris, guiding him through and making him decode something… that wasn't easy! Other levels, you could hear the barrel being scraped – collect five arbitrary pieces and go here, but *Mario* had plenty of that shit, which is pretty boring. We punctuated it with stuff like go and blow this thing up! Like the canisters at the end of Arkhangelsk. It's in the film and we could have just said go here and press X – Karl had built that in the background but it wasn't going to explode. But wouldn't it be nice if it did? So the canisters became a 'prop'. A bloody big prop. And the explosion had to be big enough to mask you switching one object with another. But then if it's a gas plant, shouldn't we have gas? We can't do f*cking gas, but we have got fog… maybe we could change the fog settings? Can we use that more than once? Maybe in the Egypt setting?"

For a game with more than its fair share of wanton destruction, the team became remarkably good at recycling. The radar on multiplayer mode is actually an oil drum texture, which explains the cloudiness on the right, and sometimes whole levels were created with the detritus they had to hand.

Karl: "As the engine got better, we were very good at reusing things. We decided we'd do the meeting room from *Moonraker*, which I just loved. We couldn't do it round, that was just too expensive, but we did a square version and linked it with being under the shuttle. Dave said those chairs just have got to fold down like in the film so we did it with door code. I remember one chair always folded wrong, but it would have taken so much coding to get it right, it was like, hey, leave it as a bug! The shuttle was made from reused satellite textures and to make it take off, we used grenade explosions. That whole level is a big hack job, but it's one of the nicest looking."

GoldenEye was always good at giving you the big picture, from the dramatic bungee jump down Byelomorye dam at the opening to the final shoot out on the Antenna Cradle, but much of its enduring charm

» Ahh, the beauty of the doorway. It provides a perfect bottleneck to take out enemies.

» (From left to right) Karl, Steve and Graham were more than happy to revisit *GoldenEye's* multiplayer when **Retro Gamer** turned up with its N64.

» Here's the man himself, tuxedo noticeably absent.

is in the detail. Bullet holes in glass, graceful forward rolls, hats being blown off heads and the knocking knees of terrified scientists.

"Those are Duncan Botwood's knees", laughs Karl. "He wasn't a professional actor, he was one of the team! There was only one big motion-capture shoot and we realised someone was going to surrender at some point, so it was, 'Put your hands up and shake your knees'. Then it would be, 'Stand there and we'll push you over'. I think we must have breached Health and Safety quite a lot…"

Graeme: "Duncan's line was, 'I had to die a million times for *GoldenEye*'. There were plenty of times when we'd get him to close his eyes and he didn't know when he was going to be pushed. He went through a lot for the game. There was blood."

It wasn't the only occasion when the nearest warm body was put to good use. Alongside the faces of Pierce Brosnan, Robbie Coltrane et al, Bea Jones scanned in virtually all the staff at Rare. At the start of each level, five faces from the extensive collection are picked at random and plonked on the bodies of your adversaries. All the development team are in there and Karl remains rather proud of the manly scar added to his own mug. More cameos were to follow, explains Steve.

"There are a few monitors in the game – one has Dave in sunglasses and a Russian hat Karl had bought in Berlin, there's one with Mark in a bowler hat on a skateboard and another has Karl doing a Python silly walk. We were just trying to make the monitors seem alive."

A notable omission are the Stamper Brothers, who declined the opportunity to have their faces featured in the game, perhaps wary of giving employees the chance to shoot their bosses at close range. But the brothers' faith in the project, protecting the team from outside interference and giving them the space to produce the best game they possibly could, means they can hold their heads high. So many of the things that make *GoldenEye* special – the bonus Aztec and Egyptian levels, the AI that sees guards dashing for alarms and the wonderful multiplayer mode (see boxout) – were the result of not having to rush out a product to meet a demoralising deadline.

Steve: "The reason it turned out so well is that no one was standing over you saying you don't need to do that, move on to the next bit. I was on the explosions for a month and I didn't have someone telling me I'd had a week and that was enough. If there had been, the game might have been out on time…"

But it wouldn't have been the game it turned out to be. The entire team flew out to E3 in 1997 to present a 99 per cent complete version of *GoldenEye* and while the game was well received, no one predicted the phenomenal success that followed. A staggering 8 million copies were sold worldwide and it remains the biggest selling N64 game in the USA, outdoing *Mario 64*, *Ocarina Of Time* and *Mario Kart*. "Actually, I was concerned it wouldn't be able to compete with *Turok*", admits Karl. "That looked better and had a better frame rate… and dinosaurs!"

Laughter all round and an appropriate juncture for the team to pick up their pads and revisit the game that marked their entry into the industry. As Steve plays through the opening level, memories are triggered like sticky mines. How Martin had done a 3D gun barrel that had to be dropped due to frame rate issues; how code had been written to let you drive the van, but it caused too many problems if you got the vehicle stuck in a dead end; how the unreachable island you can see far in the distance from atop the dam originally had a solitary guard patrolling it; how they'd had to label certain wall textures as 'floor' so guards could 'see' you,

» The name's Bond… James Bond.

which meant they would occasionally leap out of bunkers inexplicably. "At one point, we were going to have reloading done by the player unplugging and re-inserting the rumble pack on the controller", remembers Steve. "Nintendo weren't keen on that idea and I think it might have affected the pacing a bit…"

So to the main event – a ten-minute deathmatch – and as our four agents trade headshots and insults, they start to reel off the things *GoldenEye* pioneered. The sniper rifle, the gun disconnected from the camera, the civilian AI, the 3D explosions, the environment mapping (look closely at a shiny surface and you'll notice a low resolution reflection of your surroundings), body-specific hit reactions and the tasty option of dual-wielding weapons. "Didn't *Halo 2* invent that seven years later?" chuckles Karl. The list goes on, yet more fundamentally, they proved that a story driven FPS, a genre previously confined to PCs, could triumph on a console. Countless others have followed, but *GoldenEye* remains a benchmark.

And the winner? Appropriately enough, Steve, the creator of the multiplayer mode, nicks it by a single kill. Then the defeated trio realise he's been playing as Oddjob, whose diminutive stature bestows a distinct advantage and the room echoes with cries of cheat and demands for a rematch.

GoldenEye: still inflaming passions twenty years on.

» Dave Doak discovers that he still has that multiplayer magic. Just not enough to beat Steve Ellis.

"FOR THE MOTION CAPTURE, WE'D GET DUNCAN TO CLOSE HIS EYES AND HE DIDN'T KNOW WHEN HE WAS GOING TO BE PUSHED. HE WENT THROUGH A LOT FOR THE GAME. THERE WAS BLOOD" GRAEME NORGATE ON WHY THOSE GUARDS LOOK LIKE THEY'RE REALLY FEELING IT

Pokémon Snap

GOTTA SNAP 'EM ALL

» NINTENDO 64 » NINTENDO » 1999

***Pokémon Snap* is a perfect example of a developer taking a classic franchise and evolving it into something that is almost completely unrecognisable and yet utterly fantastic at the same time.** And no, we don't mean *Resident Evil: Survivor*.

The initial concept of *Snap* – travel on-rails around an island and photograph a variety of different Pokémon – sounds as far away from the original RPG as possible, but as you slowly explore the verdant paradise you discover many similarities between the two games. With the most obvious being the snapping of every single one of the island's Pokémon.

As you trundle along in your weird little buggy, various Pokémon will appear in front of you and you have a short amount of time to take the best possible picture. Points are awarded at the end of each stage and you'll gain bonuses on how well framed the critter is, how exciting the snap is, whether other Pokémon feature and other objectives.

Although your first trek is limited to a pleasant stroll along the island's beach, earning the required amount of points soon allows you access to other portions of the island. As the environment expands around you, so does Snap's actual gameplay. You're gradually given a selection of different objects with which to entice Pokémon into more snap-able positions, and part of *Snap*'s fun is working out just how you're going to be able to take that perfect picture.

With only 60 odd-different Pokémon to discover it's not going to take forever to find the majority of the beasts, but you soon start to discover that certain Pokémon can only be found in certain areas, so great cunning is required in order to take that elusive shot. Even though you can see most of what *Snap* has to offer in just a few short hours, you'll still find yourself returning to it because it's just so relaxing. Part interactive cartoon, part wildlife documentary, *Snap* has something for everybody and remains one of the N64's most unique games. It's now available on the Wii's Virtual Console, so why not give it a shot?

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How RARE RULED the N64

In its glorious 30-year history Rare has gifted the gaming world with some truly incredible games. Damien McFerran speaks to the people who made it happen during what is arguably the firm's golden era

When considering Rare's history – and taking into account the company's origins as Ultimate Play The Game – it's actually harder than you think to pinpoint the studio's zenith; that period where everything it touched turned to gold and it could do no wrong in the eyes of gamers and the press. Eighties games such as *Knightlore* and *Sabre Wulf* certainly make good cases for the 'Ultimate' period, but Rare's N64 years will be considered by many as its 'Golden Era'. Firmly ensconced in Nintendo's bosom and packed with talent from all over the UK (and beyond), the firm seemed unstoppable in the mid-Nineties and effortlessly rattled off hit after glorious hit with effortless skill.

Although Rare had enjoyed a long and prosperous relationship with Nintendo for many years prior to the launch of the N64, the game which truly cemented the bond between the two was *Donkey Kong Country* on the Super Nintendo. Sporting rendered sprites and arriving on the market at a time when 32-bit consoles were gobbling up all the column inches, it was a stunning illustration of the talent Rare held within its unassuming Twycross headquarters. Nintendo spotted this talent and invested in Rare, turning it into a second-party studio and giving it the platform to expand and usher in its best years.

"It was probably a number of things that were happening at the time which all, either by design or serendipity, dovetailed nicely to create a uniquely creative environment," says former Rare staffer Chris Seavor, the man behind *Conker's Bad Fur Day*, one of the company's most unconventional N64 titles. "Nintendo had bought into Rare, paying up front for the company to expand, giving it some pretty big cushions to sit on. Rare already had a long pedigree making games, and had the pick of the bunch of eager young coders, designers and artists from across the land, and did so with abandon, quickly building a powerhouse to make whatever they wanted, with Nintendo's blessing, money and protection. And by 'protection' I mean there was no shareholder or corporate pressure to get shit out the door no matter what. It was like,: 'Be creative, take as long as it needs and here's more cash.'"

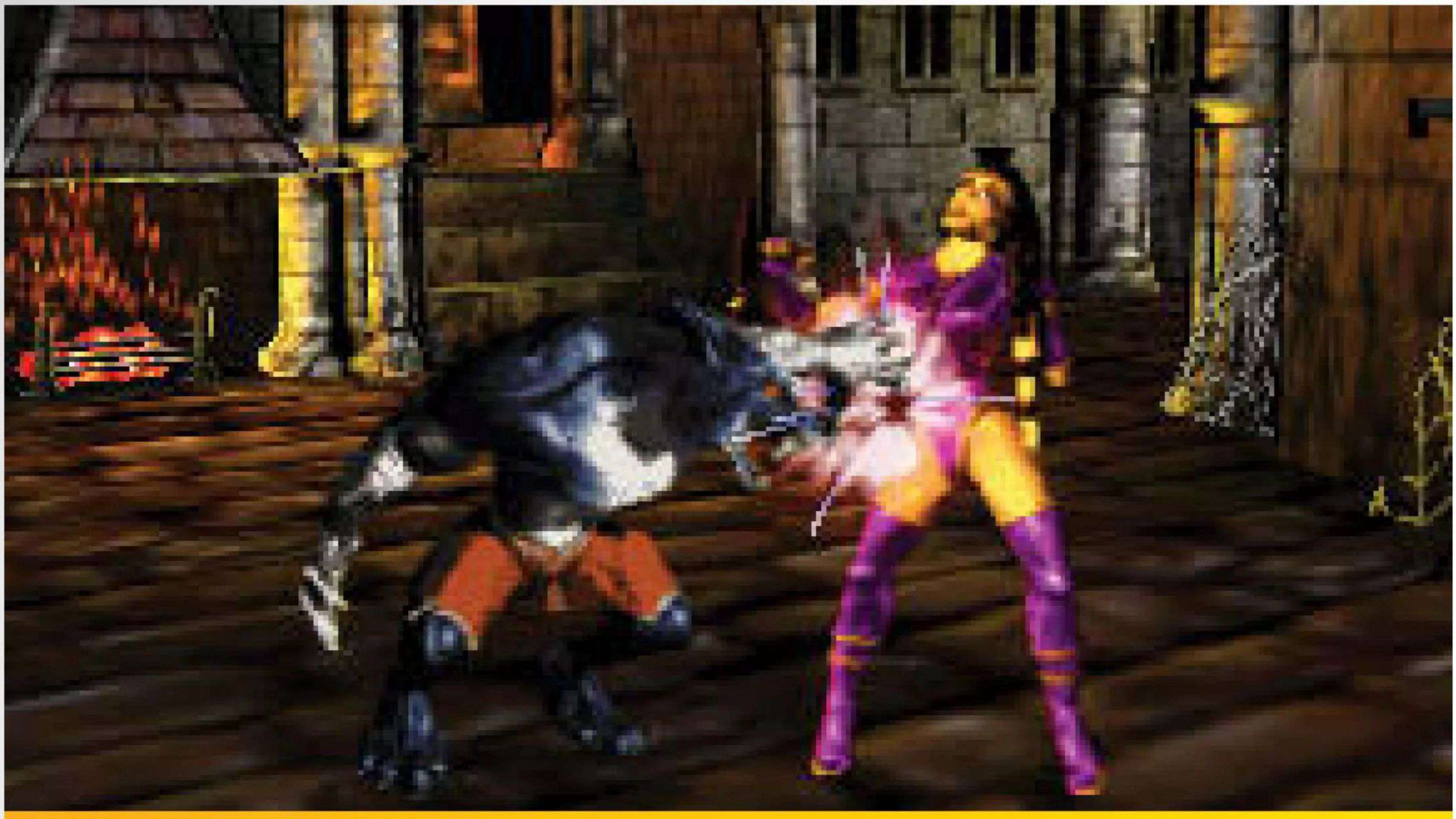
Rare becoming closer to Nintendo coincided neatly with the inception of Project Reality, which was later rechristened Ultra 64 before eventually becoming the Nintendo 64. Details of the system were sketchy in the early days, even for privileged companies such as Rare. "This kind of information often comes in stages; just an outline of what kinds of things 'Project Reality' could do at first, and then more detailed specs later," says Chris Sutherland, who spent almost 30 years at Rare and is now project director and software engineer at Playtonic Games, a studio almost totally comprised of Rare alumni. When information did appear Rare's staffers were disappointed. "At first we hoped that we could create games that had *Donkey Kong Country*-quality visuals rendered in real time in 3D," Sutherland continues. "As details emerged, though, it posed a conundrum, because there ▶

» Joanna Dark (seen here in her Xbox 360 iteration) and James Bond were two N64 heroes.

RARE ON RARE

GOLDENEYE 007

■ "During development there was a lot of internal scepticism around the game, as to whether it would get finished or, indeed, whether it would play well – perhaps arising because other teams saw only glimpses of the game. Of course the outcome was different! In fact, after release, several of the *Banjo-Kazooie* team played *GoldenEye* split-screen multiplayer every lunchtime for several years!" – Chris Sutherland



» *Killer Instinct Gold* wasn't the greatest of starts for Rare on the N64, but things would get much better.

RARE ON RARE

KILLER INSTINCT

■ "The N64 was meant to be very similar to the hardware we were using to create *KI*, however there were differences between the two systems. One was designed as an arcade machine, the other for a console. We had few limitations on the arcade machine, and so had to limit frames and optimise the game as much as possible to have it run on the N64. For instance, the arcade machine had fully rendered backgrounds. The backgrounds did not 'scroll' left and right, but played a series of frames from a sequence to give the illusion of a camera panning left/right. This gave us our great rendered background environments. However, on the N64, the backgrounds were made in sections of image files placed on polygonal meshes, so they didn't have the same degree of detail, but still looked great considering the difference between the two systems." – Kevin Bayliss

"We'd made life difficult for ourselves when building games in 3D on the N64"

Chris Sutherland

▶ was no way that the N64 could run anything that resembled those quality of visuals. By bringing *Donkey Kong Country* to the SNES we'd made life difficult for ourselves when building games in 3D on the N64."

To generate interest in its new system Nintendo needed killer software, and took the approach of pushing said software into arcades prior to a domestic launch. The forgettable driving title *Crusin' USA* was one such release, while the game produced by Rare had a long-term impact. "Rare managed to persuade Nintendo that it should make a game which represented the N64's power but which did not run on N64 hardware," says Martin Hollis, the director and producer of *GoldenEye 007*, one of Rare's most treasured games of the period. "The problem with new platforms is that first you need the hardware, then you can produce the software, and this adds a huge delay to getting to market. That delay means that customers get new hardware later and the company gets the money later. So Nintendo had some incentive to put the cart before the horse. Also Rare – namely Chris Stamper and Pete Cox – had a history in developing coin-op hardware, and there was a team with an interest in making a fighting game. These three factors came together to make *Killer Instinct* possible."

This iconic one-on-one fighter was arguably the game which gave the N64 hardware early visibility with the general public – the intro even proclaimed that it would be "available for your home in 1995, only on Nintendo Ultra 64". Given that the company was trying to ape the performance of unreleased hardware, development called for some inventive tricks. "*Killer Instinct* was a hard project and fast project, and my first at Rare," explains Hollis. "The plan was to make a new machine, based on the R4600 MIPS CPU, which was similar to the N64's CPU. Rare designed the machine, memory and motherboard – everything except the hard drive and the sound board, which I think came from Midway. I wrote the operating system, including a disc system, and for fun brought up the C compiler to target the machine. However the majority of the code was written in MIPS assembly, to get the best speed out of the machine. The hardware was basically an N64 without the graphics chip." At the time, Nintendo was understandably in no mood to highlight the fact that ▶

RARE ON RARE

BLAST CORPS

■ "One of Rare's most underrated games, and probably the one that I've returned to most often over the years, most recently in November 2015. The physics haven't aged well, but it's still as fun as it was." – Steve Ellis

» *Blast Corps* remains an amazingly inventive blaster and is crying out for an update.

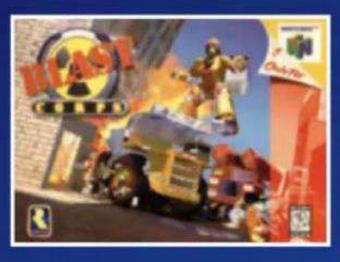
RARE'S N64 OUTPUT

Every game that Rare released on Nintendo's 64-bit console

Only For NINTENDO 64

KILLER INSTINCT GOLD 1996

■ Based on the arcade-only *Killer Instinct 2*, *Gold* introduced a training mode, fresh camera views and enhanced presentation. While *KI* had been the talk of the town in the arcades, by 1996 *Virtua Fighter* and Tekken had revolutionised the genre, making *Gold* feel a bit like an also-ran.



BLAST CORPS 1997

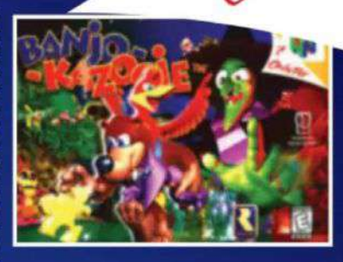
■ A game so original that there's not been one like it since, *Blast Corps* involves using vehicles to clear a path for a nuclear missile carrier. It's rarely straightforward, with puzzles being introduced which involve moving explosives or bridging gaps in the landscape. It stands as proof of Rare's talent to think up new styles of gameplay.

GOLDENEYE 007 1997

■ *GoldenEye* missed its release window and gained negative press prior to its 1997 launch. *GoldenEye 007* offers massive environments, varied objectives and a split-screen local multiplayer mode which surely made (and broke) many friendships worldwide. Needless to say, it shut the naysayers up.

DIDDY KONG RACING 1997

■ Rare's take on the *Mario Kart* formula didn't disappoint, and managed to better Nintendo's own effort in many ways. It used 3D models instead of sprites and offered a robust 'Adventure' mode which had its own storyline and boss battles. *DKR* is also notable for being the first game to star Conker.



BANJO-KAZOOIE 1998

■ This masterpiece introduced the world to Banjo the bear and Kazooie the 'Breegull', one of gaming's most iconic duos. Praised for its intricate level design, amazing visuals and typically British sense of humour, *Banjo-Kazooie* spawned several sequels and sold nearly 2 million copies in North America alone.

1996 | 1997 | 1998

BANJO-TOOIE 2000

■ The runaway success of *Banjo-Kazooie* meant that a sequel was inevitable. Major advancements include larger levels and a mini-game-based multiplayer mode for up to four players. Reviews were glowing, although critics stated it pushed the hardware too much and lacked the wow factor of the original.

MICKEY'S SPEEDWAY USA 2000

■ *This title* was published by Disney rather than Nintendo and apes the gameplay seen in *Diddy Kong Racing*. Reviews were lukewarm rather than ecstatic, with the general feeling being that the game failed to improve on previous efforts.

PERFECT DARK 2000

■ The second Rare game to require the 4MB Expansion Pak, *Perfect Dark* is considered to be a spiritual successor to *GoldenEye*. Taking the objective-based gameplay of the *Bond* outing and upping the visual complexity, *Perfect Dark* sold 3 million copies worldwide and was remastered for the Xbox 360 in 2010.

DONKEY KONG 64 1999

■ Conceived as the follow-up to the *Donkey Kong Country* series, *DK64* was intended to launch on the 64DD add-on and started production in 1997. It surfaced in 1999 on the standard N64, complete with the 4MB Expansion pak – and it required the peripheral to run the game.

JET FORCE GEMINI 1999

■ Years before *Gears Of War* popularized cover shooters, *Jet Force Gemini* offered N64 players a similar style of gameplay. Inspired by the open spaces of *Super Mario 64* and the power-up collection of *Super Metroid*, *Jet Force Gemini* remains an incredibly addictive game.

2000 | 1999

CONKER'S BAD FUR DAY 2001

■ The new millennium called for a fresh approach from Rare, which had picked up on complaints that its platforming titles were all adopting the same cute and cuddly approach. *Bad Fur Day* was the opposite – it featured foul language, violence and alcohol, and, as a result, had to be published by THQ rather than Nintendo. Despite selling poorly, it has become a cult classic in the eyes of many dedicated Rare fans. An Xbox remaster entitled *Conker: Live & Reloaded* emerged in 2005.

2001

RARE GEMS

Just a selection of the many developers that made the N64 a fantastic console

THE STAMPERS

Founders (1982 – 2007)

■ Siblings Tim and Chris founded Ultimate Play The Game in 1982 in their home town of Ashby; Rare followed in 1988. After selling Rare to Microsoft in 2002, the brothers departed in 2007 to pursue other interests.

STEVE MAYLES

Artist / Character Lead (1992 – 2014)

■ Mayles – whose brother, Gregg, is still Rare's creative director – created some of the firm's most famous characters, including the Kong family in *Donkey Kong Country* and the duo of Banjo and Kazooie.

CHRIS SEAVOR

Designer / Artist (1994 – 2008)

■ Seavor worked on *Killer Instinct* before finding fame as the designer and director of *Conker's Bad Fur Day*, a title which was so outside of Nintendo's comfort zone that it passed on publishing it.

CHRIS SUTHERLAND

Engineer, Producer & Product Manager (1989 – 2014)

■ With almost 30 years at Rare under his belt, Sutherland's influence can be felt on a large number of the company's most accomplished hits.

KEVIN BAYLISS

Artist / Head Of Graphics (1987 – 2012)

■ Bayliss created characters for *Killer Instinct*, *Battletoads* and *Diddy Kong Racing* before moving into music in 2005. He recently joined some of his old workmates over at Playtonic Games.

STEVE ELLIS

Programmer (1996 – 1999)

■ Ellis was instrumental in the development of *GoldenEye* and is credited as coming up with the game's multiplayer. He co-founded Free Radical with David Doak in 1999 and later established Crash Lab with Lee Musgrave and Martin Wakeley.

DAVID WISE

Composer (1985 – 2009)

■ Wise is responsible for the soundtracks to a great many of Rare's 8-bit and 16-bit titles, and has since gone freelance. He created the music for *Donkey Kong Country: Tropical Freeze*, which was produced by Retro Studios rather than Rare.

LEE MUSGRAVE

Artist / Head Of Art (1995 – 2011)

■ Musgrave worked on *Diddy Kong Racing*, *Jet Force Gemini* and *Mickey's Speedway*, amongst others. He cofounded Crash Lab with Steve Ellis in 2011 and is involved with preciousbluedot.

DAVID DOAK

System Manager / Designer (1995 – 1998)

■ Doak studied biochemistry before moving into videogames. He left Rare in 1998 to form Free Radical and founded Facebook game studio Zinkyzonk, which has since folded.

MARTIN HOLLIS

Head Of Software / Producer / Director (1993 – 1999

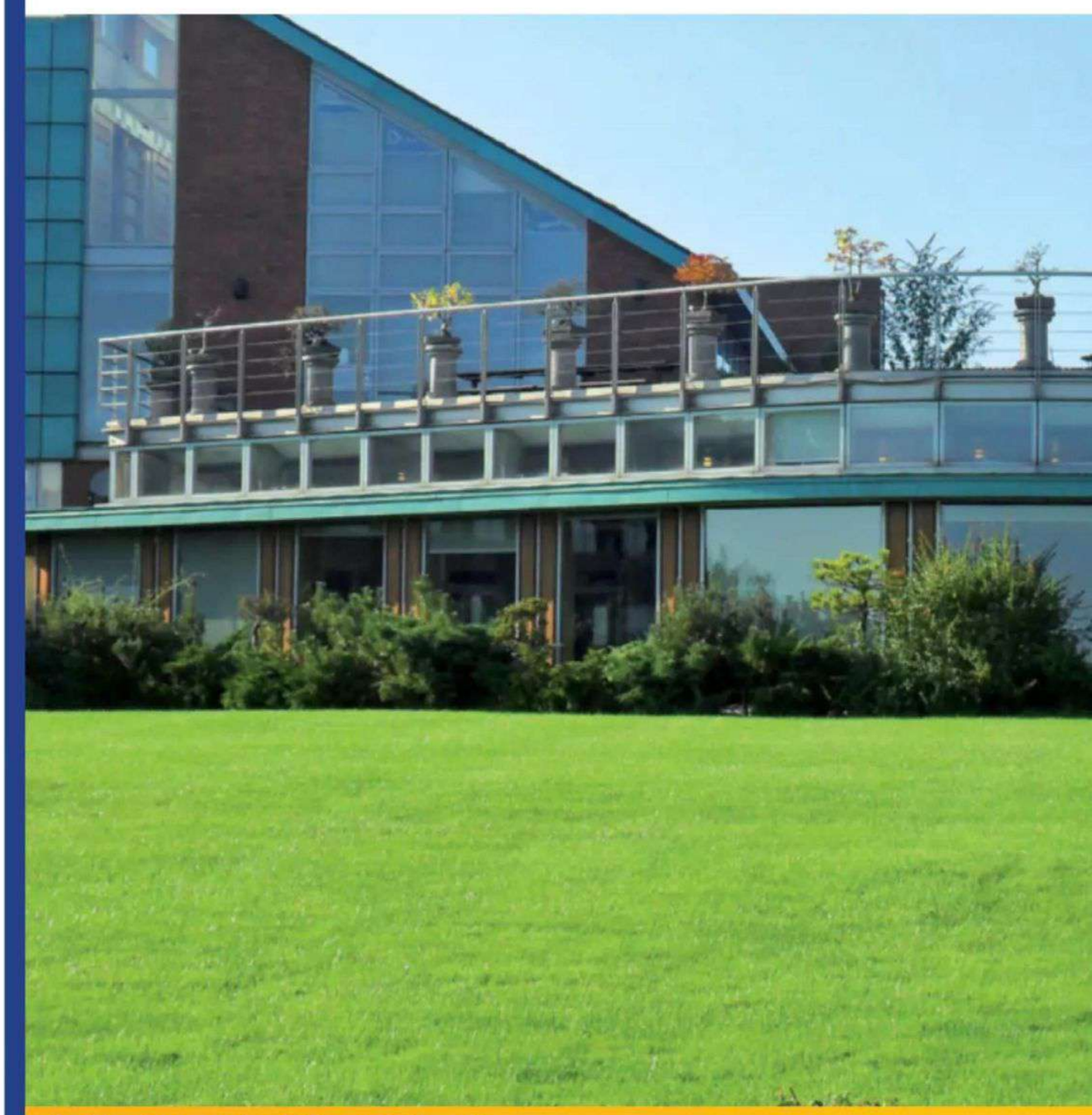
■ Hollis is responsible for *GoldenEye 007* and *Perfect Dark*, two of Rare's most acclaimed first-person shooter releases. He left in the company in 1999 to assume a consultancy role at Nintendo Of America before founding Zoonami in 2000. The studio, sadly, ceased operating in 2010.

"We each had development machines that were worth more than our annual salaries"

Steve Ellis

▶ Rare's arcade machine wasn't *totally* identical to the N64; *Killer Instinct* was supposed to be a demonstration of the power of the console, and Rare's part in this subterfuge was integral.

But Nintendo knew that it could not make a console successful on the merits of a single studio, which led to the formation of an elite 'Dream Team' of companies which had been deemed worthy of producing titles for the N64. It was obvious that Rare's name would appear on the list – in fact, some commenters at the time felt that the UK studio was the only one which had any credibility. "I was excited to join the 'Dream Team' as it was known at the time," says Steve Ellis, who is credited as coming up with *GoldenEye 007*'s groundbreaking multiplayer mode and is now producing games at Crash Lab, the studio he co-founded in 2011. "It felt like an incredible opportunity to be involved in something cutting edge. We each had development machines that were worth more than our annual salaries, and there was a real feeling of being there at the start of something new and exciting." Being part of this group meant that Rare was afforded privileges, such as early access to the hardware and software which would drive development. "We [had] some limited but



» Rare's headquarters are based in Twycross, Leicestershire.

valuable early access to documentation, prototypes and manufactured early hardware," says Hollis. "We got to see documentation of the Reality Coprocessor, listing all the instruction formats which I read from cover to cover at least five times. Later we saw early prototypes of the thumbstick-based joypad. This helped to a limited extent with designing gameplay, but, honestly, most of the control code for player movement wasn't written until we had final joypad hardware." Rare's input almost went as far as how the console would look in the flesh. "Tim Stamper did produce some renders of how he'd have liked the console to look physically, and I remember seeing lots of pictures of what looked like a cool spaceship-shaped console," reveals Kevin Bayliss, who worked at Rare from 1989 to 2005 and was lead character artist on *Killer Instinct*. "Much nicer looking than the N64 that was released, which, I have to say, looked really ugly in my opinion."

Despite the obvious talent which resided within Rare's HQ, the company was adapting to the move from 2D to 3D. "I think for a lot of people it was a huge challenge," admits Hollis. "You need to understand matrices, quaternions are helpful for rotations, viewing frustums, and so on – the mathematical parts were beyond many game developer's ken. The OpenGL heritage had an academic style and flavour and did not make these things easy to understand for people who did not have some mathematical training beyond the age of 18. On top of this, the machine was more complex than any previous console, as might be expected in the general trajectory of computers. As a third jump, people had to transition from predominantly 2D graphics pipelines where all the artists were making sprites to 3D pipelines where you are making 3D models, textures and animations. It's a big change which affects the skills of the whole team and means all your tools are obsolete. The final step was games needed larger teams so those who expected games to take two or three people only would have to adjust to a different system of working, with more specialisation."

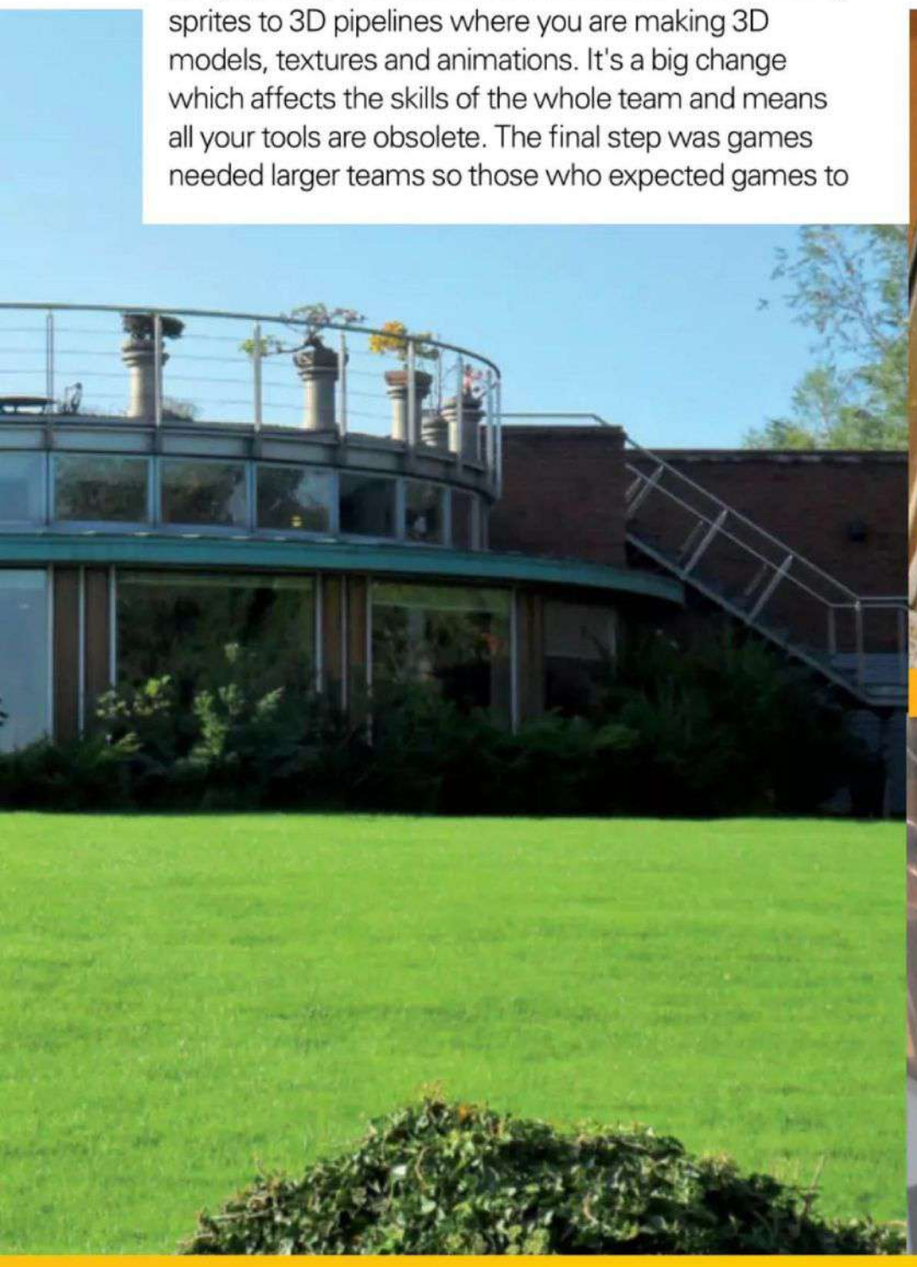
The N64's aforementioned lack of power compared to the modelling workstations that *Donkey Kong Country*'s visuals were rendered on caused some headaches for Bayliss, too. "Having gained experience with 3D modelling software, we were excited about the move from 2D to 3D," he says. "However, we had been somewhat spoiled because we were modelling with curves, rather than polygons and rendering – actually ray tracing – at a high level of quality to create great looking 2D sprites for the SNES. When we first looked at the N64 we were then having to generate graphics in real time, and the specs were so limited, with very small texture resolutions for our graphics. This took some getting used to, since we'd not really had any kind of restrictions when creating our graphics from 3D software for the SNES. We even had a huge rendering server to make sure we could create our sprites quickly enough, but all of that was no longer required when we began producing real-time 3D graphics." Steve Mayles – a character artist who served at Rare for 22 years before cofounding Playtonic Games – insists that the benefits outweighed the negatives. "It was liberating to work in full 3D," he says. "The possibilities seemed endless! A lot of the early N64 stuff was a bit grubby looking, blurred textures, so we tried to avoid that. We'd look at stuff and think, 'I'm sure we can do better than that.'"

Rare stood apart from its development rivals at the time, but something it shared with pretty much ▶

RARE ON RARE

BANJO-KAZOOIE

■ "We added an 'interesting' approach to copy protection in the *Banjo* series; previously the standard approach was that if the game code detected it was probably running an illegal copy of the game, it would just stop. However, that made it easier for hackers to just find the offending lines and remove them. Instead we added code that just 'noted' the game was probably not a valid copy and it would then amend small but critical parts of the game, e.g. the player's jump distance, or character size, this rendering the game not very playable. I have no idea whether that did actually hinder anyone attempting to copy the game though!" – Chris Sutherland



» [N64] Banjo, Conker and Kazooie, hanging out at Rare's headquarters.

» Just a few of the BAFTAs that Rare has won over the years.

RARE ON RARE

DONKEY KONG 64

■ "George Andreas wrote the words to the *DK Rap* and asked me to assist him with it. Grant wrote the music and organised the recording; neither George nor I were rappers so the session took ages as we were often way out of time. I suspect in the end that Grant had to do a lot of digital editing to get the vocals back in time!" – Chris Sutherland

▶ every other studio was an intense admiration for *Super Mario 64*, the game which proved to be the N64's killer app. "I took the time to play through mostly the entire game, which was no easy matter when all the hints and text are in a language you don't understand," says Hollis. "The game was polished and beautiful in many parts, with a variety of action that was unparalleled in 3D. At this time the prototypical 3D games were racing games, which are as linear as can be, arcade shooting games like *Virtua Cop* or *Time Crisis* and 3D fighting games, meaning *Virtua Fighter*. All these presented one problem, one style of action repeated as a monotone, with no meaningful freedom to roam. When Nintendo made a 3D *Mario* game it could've chosen to make something in a limited vein and control the scope of the project. Instead it grasped the future, bold with ambition, seeing the potential. It understood that 3D could mean freedom. It understood this from very early on, before *Super Mario 64* existed. It underpins its decision to add the joystick which they named '3D Stick'. It had an impact on *GoldenEye* and on my confidence to push towards what was only really dreaming, as written in my original design document for the game." Sutherland reveals that Nintendo's classic influenced his own design process, and that of his team. "When we were trying to consider gameplay questions, we'd start with 'How did *Mario 64* handle this case?' Then we'd consider why Nintendo chose that approach and then ask, 'Is there a better way?'"

Rare picked its sources of inspiration well, but there's more to the company's success with games than simply knowing where to look for good ideas and evolving them. The individual development teams were deliberately kept apart to create a sense of competition, and this had an impact on the quality of Rare's output. "The teams worked in separate buildings and there was little communication between them – this was deliberate in an attempt to avoid 'cross-pollination' of ideas," explains Sutherland. "This led to curious situations, such as where each team would create and maintain its own game engine. Ironically, in later years it actually made development more challenging, as with larger groups per project, teams would be split not just between upstairs and downstairs on one barn but also across separate barns. That may not seem to be a big change, but it meant communication which had previously been unconscious and implicit within a team had to be more conscious and deliberate."

» *Perfect Dark* utilised the N64's Expansion Pak, but its performance stuttered.

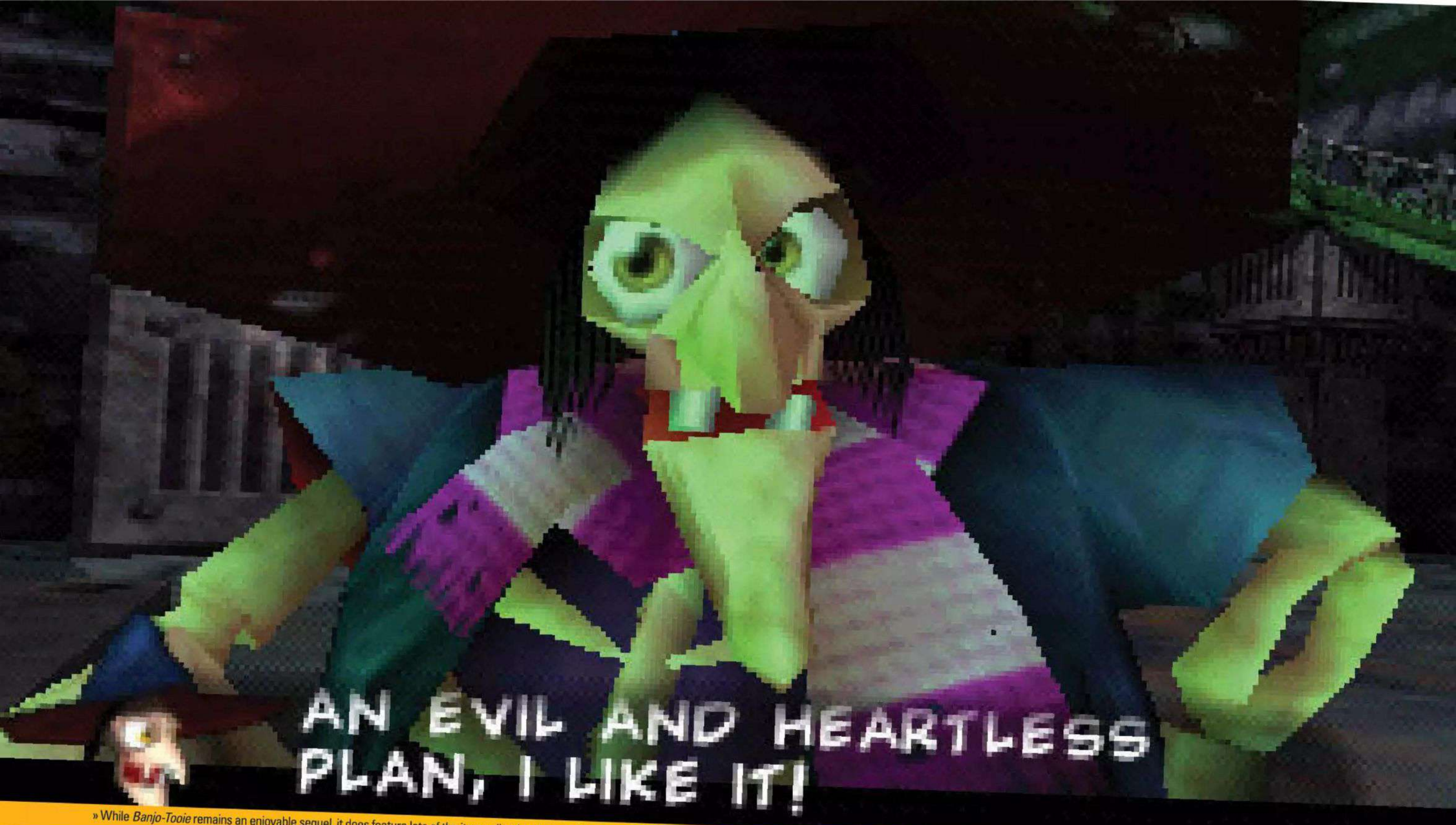
» Bottles is feeling a little worse for wear.

» *Mickey's Speedway USA* is a fun racer.

As you might imagine, keeping teams apart meant that each became focused on being the very best. "There was rivalry, yes," says Mayles with a laugh. "Because royalty payments were only given to people based on the games they had worked on rather than the company as a whole, I think that spurred people on to make the very best product possible, often requiring many, many hours of overtime over several months – years in some cases." Bayliss feels that Rare's approach in this regard was perfect. "If I was setting up a new company to create games, I would do it in exactly the same way," says the artist, who is working along with the rest of the Playtonic team on *Yooka-Laylee*, a Rare-style platformer which was successfully Kickstarted last year. "It was always very exciting to see other team's games when they were demoing them; we never really

RARE'S COMPETITORS

How Rare's game fared against their competitors



» While *Banjo-Tooie* remains an enjoyable sequel, it does feature lots of the item collection that would put gamers off later titles in the series.

knew what was going on in the other barns because we were so focused on our own projects. I was very lucky as a director and being in management because I saw all of the games in development during weekly meetings." However, Seavor grimaces at the memory. "There were lots of rivalries between teams and by my recollection it was anything but good-natured," he recalls before admitting that it helped when it came to creating its games. "I've always had a theory about this being why Rare's games were good. We weren't competing with some faceless company out in the ether. We were competing with those buggers in the other barns."

It was during the N64 era that Rare would relocate from its farmhouse location to the purpose-built complex it currently occupies, just a short distance down the road. Set away from the sleepy village of Twycross and surrounded by lush, verdant countryside, it's an impressive structure, but Sutherland admits that the move didn't have an instant impact on how Rare's staff operated. "Initially it made little difference to game development – but that was very deliberate, as the building mimicked the barn format that had existed at the farmhouse," he says. "It lost its intimacy," laments Seavor. "At the farm I felt like a surrogate son in a larger family – a badly behaved one, I suspect was the impression – but it meant you had a completely different attitude to the work. I practically lived at the farm for those first few years and it wasn't a problem. My friends were there, it was warm, there was free food, and everyone mucking in together to make games; everyone was at the coalface. No bullshit meetings, no dead weight. When we moved to the new place that all disappeared. The company got really big and in the end you were just a part of some bigger ▶

RARE ON RARE

BANJO-TOOIE

■ "I remember the biggest source of bugs for me during our test phase was the Clockwork bomb; this was because it could be controlled to walk into other areas of the game and trigger all sorts of problems. I don't expect we got them all..." – Chris Sutherland

» *Conker's Bad Fur Day* was an 18-rated game. As a result it was published by THQ in Europe instead of Nintendo.

RARE ON RARE

GOLDENEYE 007

■ "One concrete thing I can point to in *GoldenEye* is the objectives which come straight from *Super Mario 64*, although the details of implementation are slightly different. A second momentous thing is the architecture or topology of most of the levels, which we could have scaled back and linearised as we realised the difficulties they created, but instead I encouraged people to support and even add multiple routes, manifold pathways with action and keep curious backwaters to the levels." – Martin Hollis

▶ machine, even before Microsoft came along. That's progress I suppose."

As the N64's library grew, a noticeable pattern began to emerge; Nintendo would release a successful title, only for Rare to produce a thematically similar offering which – in the eyes of many players – proved to be the better choice. *Super Mario 64* was followed by the likes of *Banjo-Kazooie* and *Donkey Kong 64*, while *Mario Kart 64* was lapped by *Diddy Kong Racing*. "It wasn't so much an attempt to 'beat' Nintendo, we just wanted to make the best games possible," says Sutherland. "However, as mentioned previously, we did use Nintendo titles as 'reference standards' when we were trying to solve gameplay problems." He also feels that the company's success during the 8-bit and 16-bit years meant it could operate in a way which ensured quality, but was financially out of reach for rival studios, and perhaps even Nintendo itself. "We were developing with larger teams and also in many cases larger development times – *Project Dream* was effectively a year of 'prototyping' work that became *Banjo*, and a number of other titles also took longer. For many companies that wouldn't have been viable, but I'd assume the success of earlier NES and SNES titles made that possible."

While this one-upmanship may have ruffled some feathers at Nintendo, the company's higher-ups most likely wouldn't have minded – Rare's titles were making the N64 even more attractive to players, and were selling in their millions. "I do know that *GoldenEye* sold more copies than any other Rare game," says Hollis. "It also sold slightly better than *Super Mario 64* and *Mario Kart 64* in North America." Despite its status as a second-party studio, Rare still managed to maintain some distance from its Japanese partner. "From the development team's perspective, there appeared to be minimal influence from Nintendo," says Sutherland. "However, [the Stampers] would have kept in contact with key Nintendo staff during development so in reality feedback from Nintendo would have been filtered through them. For example, the ground slap that D*onkey Kong* performed in the *Donkey Kong Country* series originated as a suggestion from Miyamoto."

Nintendo's own IP was one thing, but Seavor recalls that the Japanese company was very much hands-off when it came to Rare's own creations. "I can really only speak of my own experience, but I found the various visits from the big wigs at Nintendo to be relatively infrequent," he states. "At no point did anyone from Japan or Redmond dictate what content would and would not be expected of the game – before the fact, anyway. After the fact there was a little bit of jiggling, but this was usually to stop us being sued! Miyamoto did come over from time to time, but his interest was never in telling us what we should be doing. I felt he was more interested in seeing what we were doing and getting excited about the process and discipline of how we were making games." Does Seavor feel that

RARE ON RARE

CONKER'S BAD FUR DAY

■ "It was *Conker* (as *Twelve Tales*) that was responsible for the visual direction change for *Banjo-Kazooie*, taking it from a mostly side-on game that used rendered 2D 'billboards' to the 3D explorathon we know today." – Chris Sutherland

» *Conker's Bad Fur Day* was a great way for Rare to end its tenure on the N64.

"Wave Race 64 was originally with boats until Tim suggested jet skies"

Chris Seavor

Rare was treating Nintendo as its biggest rival? "Of course," he replies, but asserts that it really didn't matter, given the closeness of the two firms and what they both stood to gain from a fruitful working relationship. "Graphically I think it's safe to say we beat them hands down," he continues. "Gameplay-wise, we gave them a run for their money, but we were all one happy family so everything was a boon. Everybody won: *Wave Race 64* was originally with boats until Tim[Stamper] suggested jet skis, and *Donkey Kong Country*'s DK didn't have a tie until Miyamoto added one."

As the war between Sony, Sega and Nintendo rolled on, Rare's N64 output became the envy of the industry and the jewel in the console's crown. "We had a number of great titles for the console," says Bayliss. "It is probably true that we were really on a roll with the N64, with the likes of *GoldenEye 007*, *Diddy Kong Racing*, *Donkey Kong 64*, and *Jet Force Gemini*, we had a great range of different games, at a high point in the gaming industry. It was a great generation to be involved with." It was clearly a swell time to work at Rare, too. "We probably didn't appreciate it enough at the time, but the Stampers did a fantastic job of shielding the team from the external pressures that they must have been experiencing," says Ellis. "We were able to work on the games until they had reached the standards that we were striving for, rather than having to wrap things up at some arbitrary point to hit a prearranged release date. Also – and again, I don't think we appreciated it enough at the time – we were well rewarded for the work that we did." Mayles is in agreement. "People were rewarded based on sales of their game, so if you were on a multimillion selling game, then great." Nowhere was this sense of accomplishment more evident than the company car park. "I remember when joining you got allocated a car space," says Gavin Price, another former Rare staffer who is now managing director and creative lead at – you guessed it – Playtonic. "It was roughly based on time at Rare, so new starters like myself were parked further away. As you walked closer to the building and looked over at the cars, they just kept getting better and better and better until you were passing Porsches, Lamborghinis and Ferraris right at the other end. It was evidence the Stampers did reward staff when the games did well and it had a profound, aspirational effect on myself and many others to work hard and reap similar rewards."

As the new millennium dawned Nintendo would transition from the N64 to the GameCube, with Rare taking its N64 project *Dinosaur Planet* and transforming it into *Star Fox Adventures*, its final game under Nintendo's wing. The Stampers offered Nintendo the chance to buy out the remaining 51 percent of company stock, but the Japanese giant passed. Microsoft stepped in and paid $375 million for sole ownership of the studio in 2002. Since then, it could be argued that Rare has failed to replicate the commercial and critical success of its Nintendo days, something the recent Xbox One compilation *Rare Replay* hammers home a little too effectively. But the firm still has a solid reputation and plenty of talent and resource, so could it reach those stunning highs again? "I think it's unfair to compare the Rare of today with the Rare of the N64 days," replies Mayles. "The Rare of today isn't independent, most of the staff are different, triple-A games are more expensive to produce, more people are making more – games, making it harder to stand out now. But all it needs is another great game, so let's keep our fingers crossed for *Sea Of Thieves*." ✱

» Banjo and Kazooie were given a drastic makeover for their last game on Xbox 360.

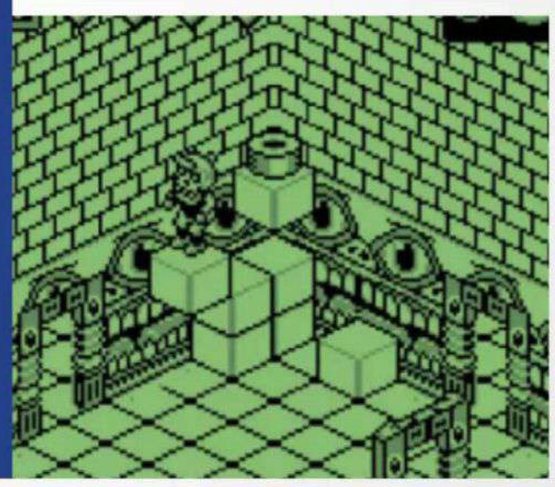
» Rare's reception contains merchandise and games of everything it has worked on.

NOT JUST N64 GAMES

More games that Rare produced

While the N64 was undoubtedly Nintendo's primary focus during the mid-to-late Nineties, it could be argued that the Game Boy Color was just as important to the firm. Rare had supported the monochrome Game Boy hardware in the early Nineties with games like *WWF Superstars*, Battletoads, *Super R.C. Pro-Am* and *The Amazing Spider-Man*, and it would go on to create a series of titles for its colour successor, including handheld versions of *Perfect Dark*, *Donkey Kong Country* and *Mickey's Speedway USA*. The studio would supply a similar level of support to the Game Boy Advance, even after Microsoft assumed control. At a time when most studios treated handhelds as a dumping ground for shovelware, Rare kept the quality bar surprisingly high.

- **MONSTER MAX** (Game Boy, 1995)
- **DONKEY KONG LAND** (Game Boy, 1995)
- **DONKEY KONG COUNTRY 2: DIDDY'S KONG QUEST** (SNES, 1995)
- **KILLER INSTINCT** (SNES, 1995)
- **KILLER INSTINCT** (Game Boy, 1995)
- **KEN GRIFFEY, JR.'S WINNING RUN** (SNES, 1996)
- **DONKEY KONG COUNTRY 3: DIXIE KONG'S DOUBLE TROUBLE!** (SNES, 1996)
- **DONKEY KONG LAND III** (Game Boy, 1996)
- **CONKER'S POCKET TALES** (Game Boy Color, 1999)
- **DONKEY KONG GB: DINKY KONG & DIXIE KONG** (Game Boy Color, 2000)
- **PERFECT DARK** (Game Boy Color, 2000)
- **DONKEY KONG COUNTRY** (Game Boy Color, 2000)
- **MICKEY'S SPEEDWAY USA** (Game Boy Color, 2001)



Mario Kart 64

IT'S ALL ABOUT THE MULTIPLAYER

» NINTENDO 64 » NINTENDO EAD » 1996

I can still remember picking up the Japanese version of *Mario Kart 64* upon release. I was a huge fan of the original SNES game and was expecting that magic to be replicated on a far more powerful console.

Sadly, the magic I experienced back on the SNES didn't quite translate in the same way. That's not to say *Mario Kart 64* is a bad game, though, because it isn't, but it does take some liberties with the classic *Mario Kart* gameplay that doesn't sit quite right with me.

Time Trails, which I adored on the SNES, aren't quite as good, meaning you're less inclined to return to them. There are some great tracks, of course, but they are on courses that feel far too wide. The earlier SNES tracks were well-thought affairs that often featured snakey sections or allowed you to battle your opponent as you raced in two-player mode. There's more room to breathe in *Mario Kart 64*, meaning less skill is required to get around all but the latest tracks.

Oh, and it introduces the Blue Dhell, which is a horrible power-up that highlights the franchise's notorious 'rubber banding' and can snatch victory away from even the most skilled of players through no fault of their own.

Yet, when you play *Mario Kart 64* with three other friends it becomes a completely different game. Those slightly wider tracks begin to make sense, it becomes obvious that it's a party game first and a racing game second and you're able to appreciate the diversity in the eight available characters. I've fond memories of playing *Mario Kart 64* with my wife and friends and judging by its high placing in our new 150 Greatest Games Of All Time feature, you all feel that way too. ✱

IME 00'25"69
ndc

LAP 2/3
LAP
2nd LAP
3rd
LAP 1/3
TIME 00'05"8
8th
LAP 1/3
TIME 00'19"16
5th

JET FORCE GEMINI

During the N64's lifespan, only one studio was able to match Nintendo when it came to games, and that was UK-based Rare. Join Damien McFerran as he goes behind enemy lines to uncover the story behind one of the company's most ambitious titles

» Early concept art for Juno shows a more elaborate look.

» Concept art for Mizar, the game's ultimate bad guy.

» The game's protagonists went through several design changes before they were finally rendered in 3D.

Back in the late-Nineties, being an N64 owner was a testing experience. Having to listen to your PlayStation-owning chums constantly droning on about Lara Croft and Solid Snake was enough to put any Nintendo devotee in a bad mood, but the general lack of quality software towards the end of the console's lifespan was especially galling. Bearing this in mind, it's relatively easy to see why Rare is held in such high esteem with veterans of the N64 era. Thanks to a string of stunning releases including *Diddy Kong Racing*, *Perfect Dark*, *GoldenEye 007* and *Blast Corps*, the company found itself in a position of regard usually reserved for the Big N itself. Another game, which cemented Rare's relationship with its fans, was *Jet Force Gemini*, arguably the company's most innovative and inventive piece of software from that period.

An epic third-person sci-fi adventure, *Jet Force Gemini* saw the player assume control of a plucky team of futuristic freedom fighters – consisting of humanoid siblings Juno and Vela, cyber-pooch Lupus and Floyd the robot – as they attempt to release the galaxy from the vice-like grip of the evil Mizar. Work began on the title in 1997, and while Rare pooled some of its key talent to work on the game, lead programmer Paul Mountain was relatively new to the company. "I joined Rare as a software engineering graduate in 1996 and worked on *Diddy Kong Racing*," he reveals. "After *Diddy Kong Racing*'s completion in 1997, I moved to a new prototype project as the lead engineer. This was to become *Jet Force Gemini*."

Falling somewhere in between Rare's cute and cuddly platforming titles and its more mature first-person shooters, *Jet Force Gemini*'s inspirations were manifold. "It's fair to say that many games from the team's collective past influenced *Jet Force Gemini*, from Eighties arcade classics right up to the most recent titles of the day," recalls Paul. "The free-roaming nature of *Super Mario 64* influenced the scale and the openness of some of the backgrounds and settings. In equal measure, the behaviour of the bad guys was a mixture of arcade space shooter formations and *Quake*-style 'attack and cover' mechanics. *Super Metroid* was also an influence on some areas of the game, such as the collecting and upgrading of weapons. I suppose, in short, we were inspired by all the good stuff we'd played and enjoyed playing."

"Many games influenced Jet Force Gemini, from Eighties classics right up to recent titles"

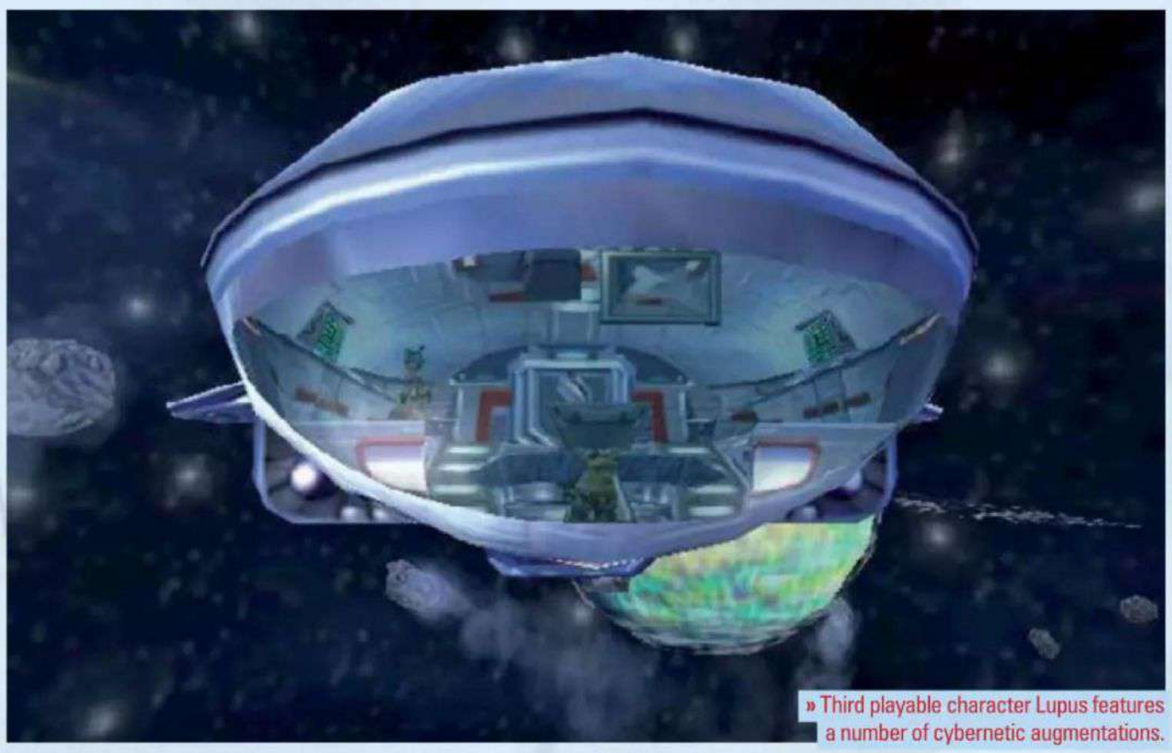
LEAD PROGRAMMER PAUL MOUNTAIN ON JFG'S INSPIRATIONS

It wasn't just in terms of gameplay that the title borrowed from other sources, either. "Visually, it tried to pull from all over the place," admits lead artist Lee Musgrave. "There are elements of *Star Wars* in there, *Aliens*, *Dune*, *Battle Of The Planets*, even *Stargate*. It was a real mix of everything and anything space-related."

Despite Rare's close affiliation with Nintendo, the creative process was free from unwanted interference. "Nintendo took regular looks at the game during development and we listened to any feedback that they gave us, but it was essentially a Rare-developed title," explains Paul. Outside pressure did result in one major change, though: the game's protagonists originally sported an overly cute visual style, but this was altered at Nintendo's behest. "I remember us showing Shigeru Miyamoto an early build," recalls Lee about the meeting. "After some particularly candid feedback on the characters, we made changes."

However, it wasn't just Miyamoto's suggestions that instigated such aesthetic alterations, as Lee is quick to point out: "The art team grew in confidence and ability throughout the creation of *Jet Force Gemini* and started to push things harder technology-wise. There were elements that were redone just because we had learned how to do them better."

Although the N64 had been available for a couple of years, developers were still getting to grips with its innovative analogue controller, and the *Jet Force Gemini* team



» Third playable character Lupus features a number of cybernetic augmentations.

IN THE KNOW

- **» PUBLISHER:** NINTENDO
- **» DEVELOPER:** RARE
- **» RELEASED:** 1999
- **» SYSTEM:** NINTENDO 64
- **» GENRE:** ACTION PLATFORMER

DEVELOPER HIGHLIGHTS

WIZARDS & WARRIORS X: FORTRESS OF FEAR
SYSTEM: GAME BOY
YEAR: 1990

GOLDENEYE 007
SYSTEM: NINTENDO 64
YEAR: 1997

BANJO-KAZOOIE: NUTS & BOLTS (PICTURED)
SYSTEM: XBOX 360
YEAR: 2008

was certainly no exception. "The overriding aim was to create a control system that was both fun and as easy to pick up and play as possible while retaining the variety of gameplay that we wanted to feature," explains Paul. "Although much of this was completed in the first half of development we continued to playtest and tweak throughout the project."

Just as it had enabled *Super Mario 64* to shine, the N64 pad became intrinsic to the *Jet Force Gemini* experience. "The analogue controller was essential to us to get the game playing how we wanted. A digital system could not have given the same level of control and targeting finesse," asserts Paul. *Jet Force Gemini*'s control scheme is a two-part affair; walking around was very much like your typical 3D platformer, but entering a combat situation triggers a switch to a closer viewpoint. This unique system has since been replicated in games such as *Resident Evil 4* and *Gears Of War*. "The idea behind the system was to retain a character-based game – hence the frequent use of a third-person view where you see the character you are playing as – but to bring in some of the tightness and accuracy of a first-person shooter," reveals Paul. "After many attempts to automate the change of view and targeting mode based on the context of the action, we settled on a manual system with the targeting camera fixed behind the character's head, as we felt this delivered the best gameplay experience." The decision was a success. "The solution we ended with is a beautiful thing," says Lee with a smile. "It feels very old-school to me: difficult, unforgiving, but ultimately precise."

One of the most refreshing aspects of the game was the way in which the player's progression throughout the various levels was handled. Initially, the only character available is Juno, but eventually other heroes are added to the roster, each faced with a slightly different route through the game world. "The characters all had an ability that was unique to them," explains Paul. "These were playtested and fine-tuned against specific parts of the environment, which we developed to take advantage of one of the abilities. This enabled certain 'forks in the road' to be introduced into the game, where two characters would be forced to go in one direction but the third would have the option – providing they recognised the opportunity – to take a different route. For example, Vela was able to swim under the water, so she could negotiate areas like underwater tunnels while Lupus was able to hover for short periods of time, giving him the ability to cross wide gaps that couldn't be jumped. This introduced challenges into the level layout and timing of game events, such as the points where you unlocked or upgraded characters. These were resolved with a mixture of forward-planning and extensive playtesting."

While the game was pushing the boundaries of what was possible in an N64 action title, it also displayed some of Rare's famous experimentation – namely some brilliant racing minigames. "We were initially trialling the introduction of a small hover ship," says Paul. "This proved to be quite fun to fly around in so we wanted to do a bit more with it than simply hover about a few levels. Several members of the team – myself included – loved racing games and had worked on *Diddy Kong Racing*, so we knocked together some tracks and basic race mechanics to amuse ourselves with. Because these proved to be so much fun we decided to work them into the game and they formed the futuristic ant racing and the top-down arcade racing games [you play]."

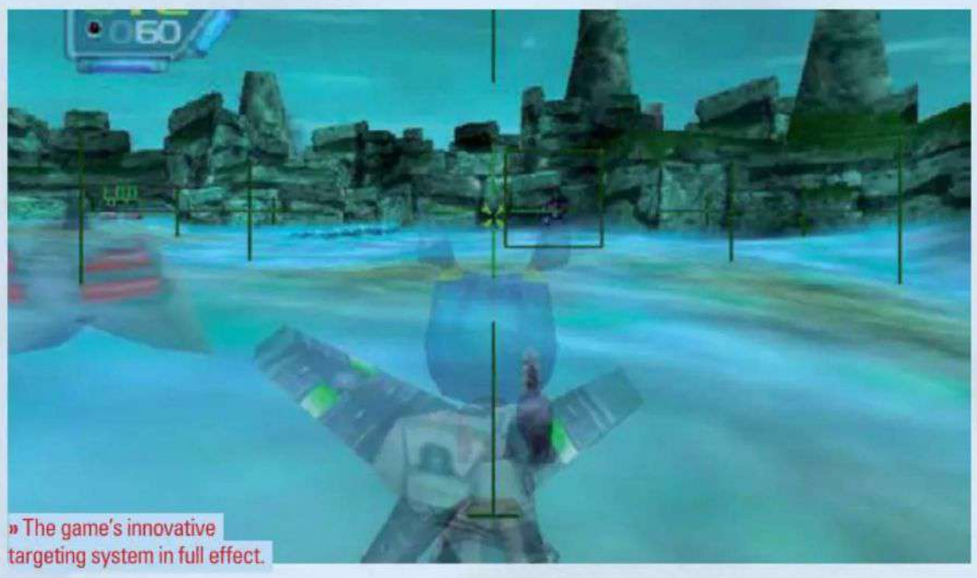
When *Jet Force Gemini* was eventually released in 1999, it received overwhelmingly positive reviews and became

Sudden Death

JET FORCE GEMINI pushed the N64 hardware to breaking point yet, for the most part, it managed to stay on the right side of acceptable. However, one area where the developer probably went a little too far was the deathmatch mode, inspired by the excellent four-player iteration previously witnessed in *GoldenEye 007*. "A good feature, but maybe a step too far," is Lee's opinion, but Paul is less repentant. "I would stand by the decision to include this in the final game. Although it wasn't perfect by any means, we had many fun hours playing this during development and hoped that players would get the same enjoyment out of it. In retrospect, given the limitations of the screen resolution, the split-screen multiplayer would have been much more suited to a first-person camera view as this would have made the player's involvement in the action feel tighter and more focused. Although this view of the action would have gone against the ethic of the main game, to some extent, it is something I would certainly address if I could turn back time." Lee sums it up nicely: "It didn't do *GoldenEye* any harm, so we thought it prudent to include."

» Some of the boss encounters seriously pushed the N64 hardware to its limits. You'll struggle to find a better visual experience on the console.

» Saving all of the Tribals in each stage was the only way to complete the game – but they often died too easily, forcing you to replay entire levels.



» The game's innovative targeting system in full effect.

» *Jet Force Gemini* featured a wide range of different locations, ranging from enclosed spaces to wide-open arenas.

It takes two to tango

ONE ASPECT OF *Jet Force Gemini* that was arguably ahead of its time is the co-op mode. This feature is unlocked once the player has successfully reassembled the fourth playable character, the amusingly named Floyd the Droid. Rather than allow both players to go off and do their own thing, the second participant would provide fire support for the first. "Like every feature it needed thought and planning to get this in the game," says Paul. "Because of the simple approach that we took with the co-operative play it made this less of a headache than it could have been. Floyd, who was your flying robot sidekick, was easier to position in the environment than a fully controllable second character. From a gameplay standpoint, this freed up the second player to concentrate entirely on helping out their playmate by targeting the bad guys, which meant the same environments could be approached in a subtly different way while, hopefully, keeping the game control as pure as possible."

a vital weapon in the N64's armoury as it entered a period of uncertainty. With the recent worldwide launch of Sega's 128-bit Dreamcast, Nintendo could no longer boast that it had the most powerful console on the block. *Jet Force Gemini* was unquestionably a headline release, but despite this there were some voices of dissent in the crowd: many people felt that the light-hearted visuals belied the incredibly harsh challenge contained within. Much of the criticism was levelled at the game's insistence on having to save every one of the Ewok-esque Tribals in order to fully complete the game. "From a personal viewpoint, if I approached this today I would definitely be more forgiving on the requirement to save all the Tribals before being able to progress to the finale," admits Paul. Lee shares a similar sentiment: "This feature was actually a late addition to the game and was quite a brutal stroke for us at such a late stage… I'm not sure we would make the same move again."

Another area where critics were quick to attack was the manner in which *Jet Force Gemini* pushed the N64 hardware to its limits, which resulted in what is arguably one of the best-looking games on the console, but also gave rise to painful bouts of slowdown. However, Lee remains unrepentant. "We grew as developers and artists throughout *Jet Force Gemini*. It was the proving ground for many people still at Rare today, and as we got better we found new and inventive ways to make the N64 sing… and strain."

Paul agrees: "As a developer who wants to push everything to the limit, and beyond sometimes, there nearly always arises a craving for more power from the hardware." With this in mind, why, then, did the company not choose to make use of the recently released 4MB Expansion Pak? "Although the Pak was due to be released with *Donkey Kong 64*, it remained something that all N64 owners would not necessarily have access to," explains Paul. "We wanted to deliver the same experience to all players and were confident that we could do this using the standard 4MB of RAM on the console. This decision allowed us to focus all of our efforts on getting everything that we wanted working on an unexpanded console, and I firmly believe that we were able to do this." Lee adds another explanation: "It would have made the production costs go up and the release timescale less favourable. We were confident that we could graphically outdo many games that were using the Pak regardless. We were right."

> **"Jet Force Gemini was the proving ground for many people still at Rare today"**
> LEAD ARTIST LEE MUSGRAVE ON JFG'S LEGACY

Both Lee and Paul are still employed by Rare (when this article was first published) and they both have fond memories about *Jet Force Gemini*. "I love the epic nature of the whole thing – it really feels like an adventure as you play through, and I like the old-school feel too," gushes Lee. "I think the art team did a great job in pushing things as far as they could go at the time, and I also love the variety of gameplay in the product – proper value for money!"

Paul is equally pleased with the end result and loves how it all turned out: "I am very proud of the whole game. It was a terrific game to work on with an imaginative and enthusiastic team of game players developing it. I enjoy some of the slightly more off-the-wall humour that is dispersed throughout the game and, as an engineer, I can hopefully say this without ego: the graphics were beautiful. I am glad that we took on the challenge of producing a third-person shooter and also glad that we produced a title that, although challenging, never takes itself too seriously. It was fun to incorporate so many elements into the title with – to name a few – the multiple characters and weapons, the bosses, the ability to disguise yourself, the nightclub complete with DJ, the racing games and the Floyd mini-games hopefully providing great variety for players. It was a great project to be involved with and I feel very proud of what it achieved."

Nintendo 64 controller

» **PLATFORM:** NINTENDO 64 » **RELEASED:** 1996 » **COST:** £8+ UNBOXED (£15+ BOXED)

One of the first things you'll think when viewing Nintendo's controller is, "How on earth am I going to use that?" It's arguably one of the most intimidating looking controllers for a mainstream console, mainly because of those three prongs, which make you question where you should actually hold the thing. There's no real right or wrong way of course (although we prefer ignoring that middle prong most of the time). Some games certainly work better than others (most obviously Nintendo's own titles) but, regardless, it's a surprisingly comfortable controller to use.

Continued practice helps and after a little time the positions of some of those out of the way buttons (particularly the Z trigger) begin to make perfect sense. Like the Dreamcast pad, it's crying out for an actual second analogue stick, but the C buttons do work surprisingly well. Some first-person shooters even allowed you to use two pads so you could have access to two analogue sticks (it also works brilliantly with *Star Wars Episode I: Racer*). It can even handle Rumble Paks and Controller Paks, making it one of Nintendo's most surprising and versatile pads. Once you actually get used to using it...

N64 Controller Fact

■ Nintendo partnered up with LodgeNet in 1997 and released a distinct controller for various hotels in the United States. In addition to allowing you to access numerous games, it could also act as a TV remote.

ESSENTIAL GAME

Super Mario 64

Few games highlight the versatility of the N64's unique looking controller as well as *Super Mario 64*. Mario not only gains access to a large number of exciting new moves; but controls brilliantly too, creeping around corners or running over short distances with ease. It not only does its best to highlight all the main aspects of Nintendo's pad, but also justifies the price of the unit itself. A stunning example of a triple-A launch game that's still one of the best examples of the genre.

The Legend Of Zelda: Majora's Mask

UTTER REDO OF TIME

RETROREVIVAL

» NINTENDO 64 » NINTENDO » 2000

While *Ocarina Of Time* might be a shoo-in for any 'greatest N64 games ever' discussion, I've always felt that *Majora's Mask* gets massively short-changed as a result. Link's second N64 outing is far more inventive in its structure. With just three days to prevent Skull Kid crashing the moon into Termina, it's all about playing out those same 72 hours over and over, with landmark achievements carrying over between rewinds so that you can chip away at the unfolding mystery and develop an intricate working knowledge of what happens where and when in order to save the day.

Part of the reason *Majora's Mask* doesn't get the same love as its predecessor – unique structure aside – simply comes down to timing. *Ocarina Of Time* came out when the Nintendo 64 was in its prime, while *Majora's Mask* was so late in its life that it pretty much launched alongside the PlayStation 2. Uptake was further limited by the fact that it was one of the few N64 games that required the Expansion Pak in order to even run, these factors conspiring to lead to sales of less than half of Link's previous N64 adventure.

It's so different to every other *Zelda* game – darker in tone, smarter in its puzzles and forcing players to develop a much better understanding of their surroundings, it still holds up brilliantly today. Whether you play Grezzo's excellent 3DS remake, the Virtual Console release or the original game, just make sure you do play it... there's nothing else quite like it. ✱

TOP 25 NINTENDO 64 GAMES

Retro Gamer readers have cast their votes and top developers have had their say – these are your top 25 games on Nintendo's groundbreaking console. Join Nick Thorpe for the countdown...

Developer Top Picks

Blast Corps

"I remember when *Blast Corps* came along – the crew was gathered around an N64 saying, "No way! How are they doing that?" I love seeing creativity and innovation in gaming, and *Blast Corps* didn't just manage to do it on a technical level, but they innovated along the lines of the actual game design"

Doug TenNapel
(Earthworm Jim, The Neverhood)

Jet Force Gemini

DEVELOPER: RARE **YEAR:** 1999
GENRE: THIRD-PERSON SHOOTER

25 **Kicking off your** top 25 is the first of many Rare games. *Jet Force Gemini* combines elements of platform and shooting games, both genres in which the developer was proficient during the N64 era. As a result, you'll have a lot of exploring to do as you seek to push back the forces of Mizar, the game's antagonist. Customisable multiplayer modes round off an accomplished package, as is common for Rare games.

International Superstar Soccer 64

DEVELOPER: KONAMI COMPUTER ENTERTAINMENT OSAKA
YEAR: 1997 **GENRE:** SPORTS

24 **Konami's follow-up** to its SNES hit *ISS Deluxe* was a huge presentation upgrade, taking advantage of the N64's power. Aided by the inclusion of some hilarious commentary, the new 3D visuals greatly enhanced the game's sense of realism. And while the game didn't feature real player names, it was easily a match for *FIFA 98: Road To The World Cup*.

Excitebike 64

DEVELOPER: LEFT FIELD PRODUCTIONS
YEAR: 2000 **GENRE:** RACING

23 ***Excitebike*'s return in** 2000 was as welcome as it was unexpected, with the series having largely lain dormant since the 1984 debut of its NES precursor. The dirt track racing proved a good fit for the move to 3D, and the addition of mini-games and a track editor gave the game real longevity. Unfortunately, *Excitebike 64*'s release was delayed until the N64's mid-2001 decline in the UK, perhaps explaining its low position in your chart.

Beetle Adventure Racing

DEVELOPER: PARADIGM ENTERTAINMENT
YEAR: 1999 **GENRE:** RACING

22 **Even the greatest** of games can look like losers on paper – after all, "an Italian plumber goes running and occasionally jumps on turtles" is the no-frills description of one of the most important games of all time. So it is that we come to *Beetle Adventure Racing*, a licensed racing game in which players can only choose a single model of car – but unlike the likes of *Ferrari F355 Challenge*, the single model is a modest economy car. However, in spite of a distinctly unexciting premise, *Beetle Adventure Racing* delivers a surprisingly good experience.

The key word in the title is "Adventure" as the game's six tracks has a distinctive theme, from the Egyptian-themed Sunset Sands to the quintessentially English Coventry Cove. *Beetle Adventure Racing* is a game in which you'll rarely stick to the track, too. In a similar fashion to arcade racers such as *GTI Club* and *Hydro Thunder*, each track is filled with shortcuts and alternative routes, allowing players to crash through barns, tear down narrow side streets and even drive through caves. These secret routes often hide items, from nitro boosts to points used to unlock extra arenas in the multiplayer Beetle Battle mode.

Diddy Kong Racing

DEVELOPER: RARE **YEAR:** 1997
GENRE: RACING

21 **15 years before** Sonic and his mates raced each other across land, sea and air, Rare busted out planes and hovercrafts in an attempt to claim *Mario Kart*'s throne. Depending on the course, players could choose either of these vehicles or karts, with drivers such as Banjo and a pre-booze Conker joining Diddy Kong on the starting grid.

The real strength of *Diddy Kong Racing* lies in its excellent Adventure Mode, which provides a satisfying single-player experience unlike that offered by *Mario Kart*. Winning regular races unlocks boss races, beating bosses opens up coin-collecting challenges, and so on – there's a hell of a lot to do over the game's 30 courses before you ever get any other players involved.

Super Smash Bros.

DEVELOPER: HAL LABORATORY **YEAR:** 1999 **GENRE:** BEAT-'EM-UP

20 **The N64 is** one of the all-time great multiplayer consoles, in part due to Nintendo's shrewd inclusion of four controller ports on the console, and party-oriented games like *Super Smash Bros* helped to cement that reputation by allowing Mario, Pikachu, Link and Samus to beat each other up.

The key to the wide appeal of *Super Smash Bros* is its deliberate avoidance of fighting game conventions. The game's violence is cartoonish, the controls are simple and even traditional life bars are discarded, in favour of a percentage system that has no definite knock-out point. Platform-based stages and randomly generated items mix things up further, creating a chaotic environment in which everyone has the potential to win a round.

"I'd never played anything quite like it before, nor have I since. The combination of the great characters, writing, music and quirky Japaneseness (it's a word) make it a very unique experience"
Nathan Wind

Mystical Ninja Starring Goemon

DEVELOPER: KONAMI COMPUTER ENTERTAINMENT OSAKA
YEAR: 1997 **GENRE:** ACTION-ADVENTURE

19 **While Goemon and** chums starred in three N64 adventures, it's the first one that makes the cut here. This action-adventure follows the titular hero and his companions Ebisumaru, Yae and the mechanical ninja Sasuke, as they try to work out just who was behind a UFO attack which turned the Japanese Oedo Castle into a European-style castle.

This is one of the more surprising entries in your top 25, as sales weren't tremendous and critical reception was mixed. However, it has cult appeal – the game's medieval Japanese setting and bizarre sense of humour give it a unique boost.

Paper Mario

DEVELOPER: INTELLIGENT SYSTEMS **YEAR:** 2000 **GENRE:** RPG

18 **Much like Square's** SNES outing *Super Mario RPG*, *Paper Mario* drops Mario and his friends into a role-playing game with an eye-catching visual style – indeed, *Paper Mario* was announced as *Super Mario RPG 2*. But where the SNES game tried to punch above its weight with pre-rendered 3D visuals, the N64 game goes in the opposite direction, with every character represented as a lovingly drawn paper-thin cut-out instead.

Though it operated a menu-based combat system, *Paper Mario* included an active element in battles with the use of the 'action command' system – button presses timed with attacks or guards would increase the effectiveness of your attacks, elaborating on *Final Fantasy VIII*'s implementation of a similar system. However, it was the setting rather than the mechanics that made *Paper Mario*, with the Mushroom Kingdom coming alive thanks to Goomba families, a green-eyed Luigi and Bowser's unceasing belligerence.

Pokémon Snap

DEVELOPER: HAL LABORATORY/PAX SOFTNICA
YEAR: 1999 **GENRE:** PHOTOGRAPHY

17 **A first-person rail** shooter of a rather different kind, *Pokémon Snap* challenges players to shoot photos of Nintendo's collectable critters. You play a Pokémon photographer who travels through a variety of environments in a small rail cart, taking photos which are then scored by Professor Oak. Higher points are awarded for keeping the Pokémon in the centre of the frame, catching it doing interesting things and getting more than one of the same species in shot.

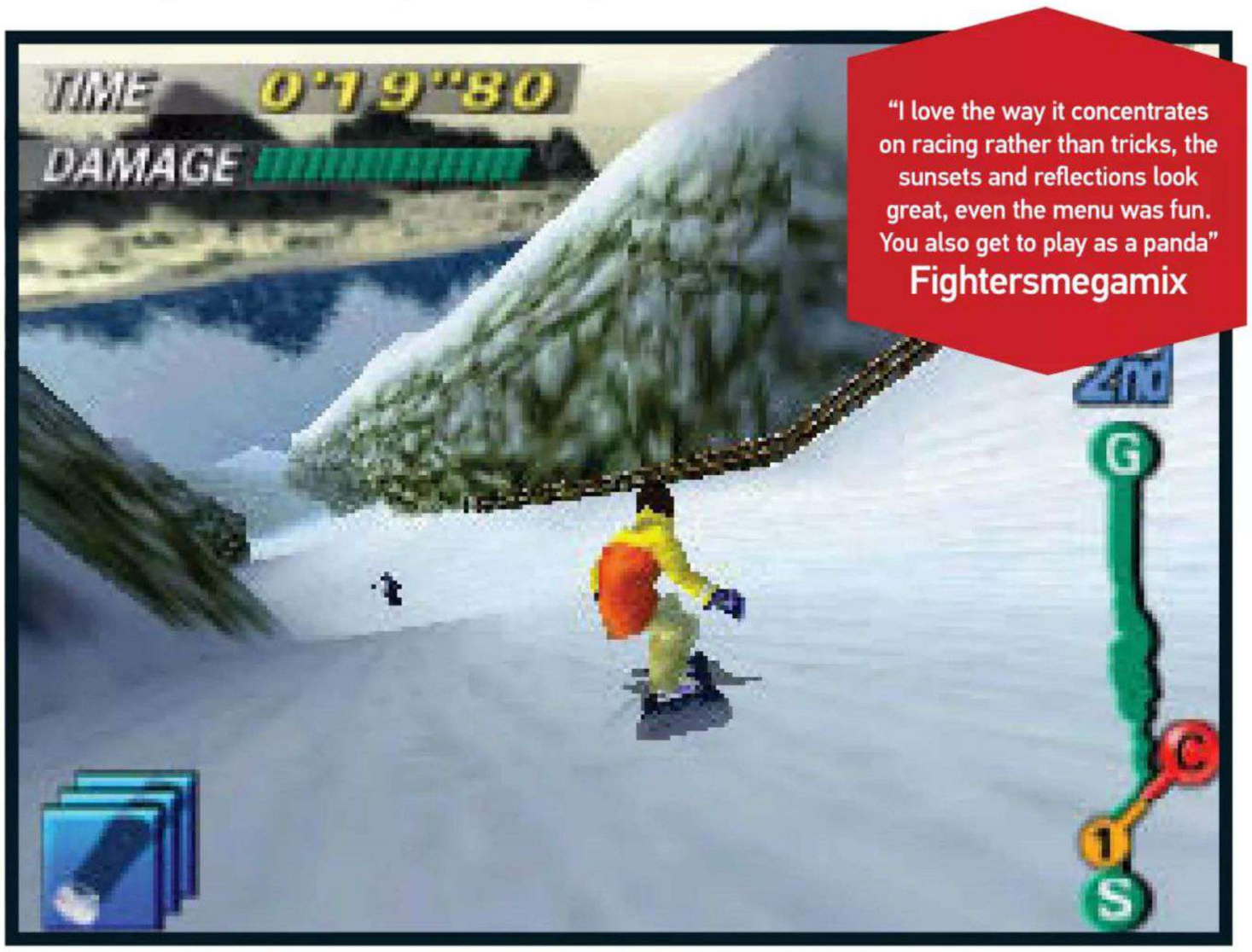
It's a simple game, but one enhanced by the level of interaction afforded by items which can be thrown – food will lure Pokémon in for better shots, while pester balls will make them angry and extract them from hiding places. While the selection of Pokémon featured is pretty small at just 63 of the original 151, their interesting animations and the diversity of the game's seven courses hook players easily.

1080° Snowboarding

DEVELOPER: NINTENDO EAD **YEAR:** 1998 **GENRE:** SPORTS

16 **Nintendo EAD isn't** traditionally thought of as a great developer of sports games, but *1080° Snowboarding* isn't a traditional Nintendo EAD game. While Japanese staff made up the bulk of the team, the coding was handled by two Englishmen, ex-Argonaut programmer Giles Goddard and Colin Reed, who has most recently been working on the *Forza Motorsport* series. Compared to contemporary snowboarding games like the *Cool Boarders* series, *1080° Snowboarding* took a more realistic approach to the sport, placing a greater emphasis on technical aspects such as correctly landing after tricks.

That emphasis on realism carried over to the game's visuals, and *1080° Snowboarding* was graphically incredible upon release. Sunlight was reflected in the snow in a manner quite unlike anything else seen at the time, characters didn't exhibit the joints between limbs that were common in so many other games, and there was even a little lens flare on the camera. The gameplay was equally impressive, thanks to level designs which included hidden routes and a variety of natural places to perform tricks, securing *1080° Snowboarding*'s status as an unexpected but undisputed hit.



"I love the way it concentrates on racing rather than tricks, the sunsets and reflections look great, even the menu was fun. You also get to play as a panda"
Fightersmegamix

Conker's Bad Fur Day

DEVELOPER: RARE
YEAR: 2001 **GENRE:** PLATFORM

15 ***Twelve Tales: Conker 64*** didn't stand out from the crowd when it was announced, so Rare extensively retooled its planned family-friendly platformer into the tale of a foul-mouthed alcoholic squirrel. The changes clearly worked out – after all, who can forget their first encounter with the Great Mighty Poo?

Lylat Wars

DEVELOPER: NINTENDO EAD
YEAR: 1997 **GENRE:** SHOOT-'EM-UP

14 **Better known as** *Star Fox 64* elsewhere (including the 3DS update), this on-rails shooter bundled the N64's Rumble Pak peripheral. The game expanded on its SNES predecessor by offering free-flight boss areas. It also gave us the "do a barrel roll" internet phenomenon…

WWF No Mercy

DEVELOPER: AKI CORPORATION
YEAR: 2000 **GENRE:** BEAT-'EM-UP

13 **The best wrestling** game ever? It could be – fans still love its refined grappling system over a decade later. *No Mercy* perfectly encapsulates the popular Attitude era of the WWF, and is packed with big names like The Rock, Stone Cold Steve Austin and The Undertaker.

Pilotwings 64

DEVELOPER: NINTENDO / PARADIGM ENTERTAINMENT
YEAR: 1996 **GENRE:** FLIGHT SIMULATOR

12 **Just as *Pilotwings*** had demonstrated the Mode 7 backgrounds of the SNES, *Pilotwings 64* is a spectacular demonstration of the 3D environments that the N64 offers. Using a jetpack and hang glider in the main game is fun, but the bonus cannon event remains our favourite.

Perfect Dark

DEVELOPER: RARE
YEAR: 2000 **GENRE:** FIRST-PERSON SHOOTER

11 **Trying to top** the success of *GoldenEye* was an unenviable task, but one which Rare set out to achieve with this sci-fi shooter. As a late release that utilised the N64's Expansion Pak accessory, *Perfect Dark* boasted substantially improved visuals over its predecessor.

"Rare at the height of its powers. Powers that would extend throughout its N64 canon, in fairness, but this is the kind of original concept that's missing from Nintendo's consoles today"
Team Alfie

Blast Corps

DEVELOPER: RARE **YEAR:** 1997 **GENRE:** ACTION

10 **Smashing things is** fun. That isn't an opinion, that's a universal truth known even to babies, who giggle as they clumsily knock over their building blocks at nursery. *Blast Corps* recognises this fact, and gives the player the opportunity to smash buildings in a multitude of ways. This usually has a purpose, such as clearing a path for a nuclear truck, but you'll never care too much about that because the fun of demolition is always your primary concern.

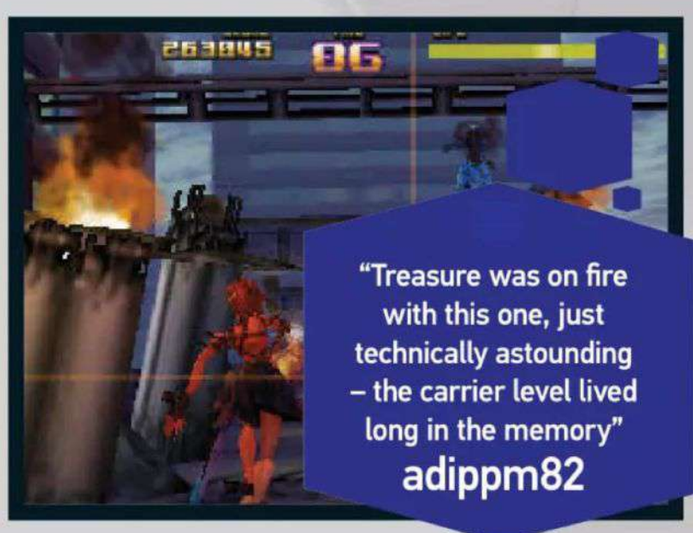
The vehicles on offer allow players to demolish buildings by sliding the tail of a truck, attacking from the side with extending arms and even just charging straight in. But our favourite is the jetpack, which allows you to soar into the air before raining down destruction upon the helpless concrete constructs.

Banjo-Kazooie

DEVELOPER: RARE **YEAR:** 1999 **GENRE:** PLATFORM

9 **We've already seen** the last of Rare's N64 platformers pop up in this list, and the first joins it here. *Banjo-Kazooie* was one of the games which gave Rare a formidable reputation for crafting 3D platform games, and for good reason. The dynamic duo of a bear and a bird employed a variety of different techniques in their quest to rescue Banjo's sister Tooty.

Drawing on Rare's design work on the *Donkey Kong Country* series for the SNES, item collecting was a huge part of *Banjo-Kazooie*, to the point that the pause screen tracks seven different types of pick-ups as well as displaying your life and energy. Each stage is packed with things to do as a result, making the game a dream for both intrepid explorers and completion fanatics.



"Treasure was on fire with this one, just technically astounding – the carrier level lived long in the memory"
adippm82

Sin & Punishment

DEVELOPER: TREASURE

YEAR: 2000 **GENRE:** SHOOT-'EM-UP

8 **The N64 wasn't** popular in Japan, where it finished in third place behind the Saturn, and there are few essential import games as a result. But if there's one game that made owning an import-ready N64 worthwhile, it was *Sin & Punishment*. Treasure's game is much like a 3D *Cabal*, with the N64 pad allowing you to move and aim independently. As an arcade-style blaster the game is on the short side – a proficient player can beat it in less than two hours – but it's packed full of bosses and set-pieces that ensure you'll return to it. *Sin & Punishment* is now available to international audiences, as it was translated and released on the Wii's Virtual Console.

Wave Race 64

DEVELOPER: NINTENDO EAD

YEAR: 1996 **GENRE:** RACING

7 **Sometimes, a game** does just one thing so well that it has the potential to overshadow everything else in the game. In *Wave Race 64*, the sequel to a tame top-down racer for the Game Boy, that thing was water. No other game captured the look and feel of racing on water in quite the same way and while it might not have retained the visual impact it had in 1996, *Wave Race 64*'s water physics remain hugely impressive.

The rest of the game is impressive too, due largely to excellent track design. It doesn't have the exuberance of a game like *Mario Kart 64* or *Diddy Kong Racing*, but it does boast some spectacular graphical effects.

F-Zero X

DEVELOPER: NINTENDO EAD

YEAR: 1998 **GENRE:** RACING

6 **If you've never** played *F-Zero X* before, you might be looking at it here and wondering what all the fuss was – and is still – about, but allow us to put your doubts to rest. The game looks incredibly sparse, but this deliberate visual restraint allows it to convey an unrivalled sense of speed at a high frame rate. Moving into 3D visuals allowed Nintendo EAD to experiment with some crazy anti-gravity track designs that just weren't possible on the SNES, with players racing inside and outside of pipes, as well as around full loops. There's even a random track generator, which extends the game's lifespan far beyond other racing games.

Developer Top Picks

Mario Kart 64

"I remember playing it in four-player mode at the King Of The Jungle offices and wanting to murder anyone that red-shelled me! It was manically addictive in multiplayer mode, and definitely an office favourite for a while. Nothing better than getting the invincibility star and squashing all your mates"

Raffaele Cecco
(Exolon, Stormlord)

The Legend Of Zelda: Ocarina Of Time

"Life just ground to a halt for two or three weeks while I completed the game. The simplicity of control with the wide variety of things you can do is just what I want from a game like this. Miyamoto at his best once again"

Jon Ritman
(Match Day, Head Over Heels)

Wave Race 64

"I used to be a programmer for many years, so when games appeared that were technically spectacular, I not only appreciated them on a gameplay level but on a 'how the heck did they do that?' level. *Wave Race 64* had me scratching my head as the simulation and feel of zipping across really choppy water was excellent"

David Perry
(Earthworm Jim, MDK)

Diddy Kong Racing

"It was a great game to be involved with, and I loved the twist of the added storyline and adventure element. It wasn't just a racing game, but had a little of everything. The Rare sense of humour, and the cross between *Mario World* with a racing genre, just made it exciting and new"

Kevin Bayliss
(Killer Instinct, Diddy Kong Racing)

GoldenEye 007

"If I'm only allowed one, it's clearly *GoldenEye*. I was so addicted it quite literally caused *Alundra*'s release to be late. I kept thinking about it when writing the English version of *Alundra* and taking breaks to play it, which turned into a diversion of an hour or more every time"

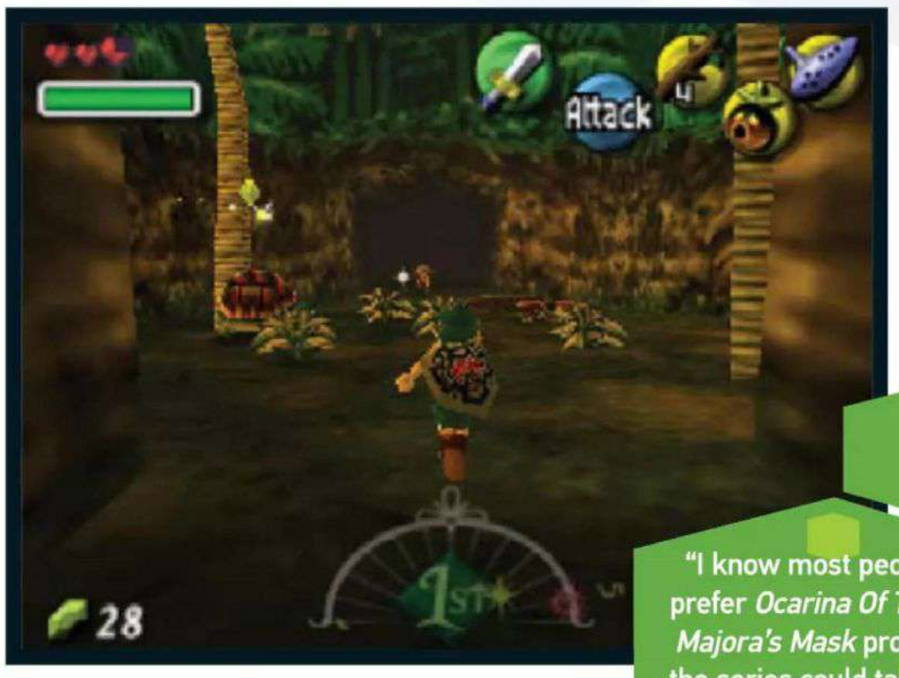
Victor Ireland
(Lunar: The Silver Star, Alundra)

Mario Kart 64

DEVELOPER: NINTENDO
YEAR: 1996 **GENRE:** RACING

5 **Hands up: how** many of you have sworn over being blasted with lightning on the Wario Stadium jump? Quite a few, we're guessing. *Mario Kart*'s multiplayer has always drawn out a variety of emotions, creating memories that have propelled the game into your top five.

The first 3D *Mario Kart* game introduced many recurring elements of the series, including mini-turbos for drifts, fake item boxes and the dreaded leader-seeking blue shell, while removing the CPU-only special items found in *Super Mario Kart*. But for all of these improvements made to the already sterling formula, the biggest upgrade came from the hardware itself – amazing four-player split-screen multiplayer.



"I know most people will prefer *Ocarina Of Time*, but *Majora's Mask* proved that the series could take a turn to the dark side, and do it so well"
gunbladelad

The Legend Of Zelda: Majora's Mask

DEVELOPER: NINTENDO EAD
YEAR: 2000 **GENRE:** ACTION-RPG

4 **Few games have** a more compelling premise than that of *Majora's Mask*. Faced with the impending disaster of a falling moon that will obliterate Termina in just three days, Link must travel back and forth in time to save the world. Dungeons follow the excellent template set out by *Ocarina Of Time*, but other mechanics take centre stage in *Majora's Mask*. With control over time allowing the player to work out the daily routines of the townspeople and a variety of masks to affect their reactions to Link, the game features a deeper level of interaction with other characters than prior *Zelda* games.

GoldenEye 007

DEVELOPER: RARE **YEAR:** 1997 **GENRE:** FIRST-PERSON SHOOTER

3 **Miles in front** of the fourth-placed game is Rare's N64 masterwork. It might have arrived two years after the film, but that didn't hurt this James Bond tie-in one bit – after all, it would have been churlish to criticise the timeliness of a game this good.

The key to Rare's approach was a flexible adherence to the movie's script. Stages were crafted from very small sequences of the film or even made up entirely. What's more, the game's excellently designed stages included a variety of objectives that could be tackled in the order of the player's choosing, giving a sense of freedom that was uncommon in games of the time.

But the single-player mode is only half the story. Given the longevity it lent to the game, it's surprising that multiplayer wasn't a key part of the game's design from the beginning. The mode was added late in development, but proved to be an important selling point for the console as well as the game – the superb deathmatch mode was the perfect advert for the N64's four control ports, and helped to cement the system as the machine of choice for multiplayer fanatics.

While Rare would later develop its first-person shooter template further with *Perfect Dark*, readers have remembered the impact that *GoldenEye* had upon release. As well as being a rare example of a worthwhile movie licence, the game proved that consoles could host first-person shooters that were at least as good as those on PC, if not better. Keyboard warriors could keep *Quake* – N64 owners were too busy crowding around the TV for split-screen *GoldenEye*.

"It absolutely nailed the atmosphere of being James Bond, from the comedy enemies to the ricocheting bullet sounds and the awesome music – somehow it's much closer to the movie feel than most Bond games that followed"
Qazimod

The Legend Of Zelda: Ocarina Of Time

DEVELOPER: NINTENDO EAD
YEAR: 1998 **GENRE:** ACTION-RPG

2 **Only narrowly missing** the top spot is the first 3D *Zelda* game, one of the greatest games ever designed. Link's fifth quest sees him once again taking on Ganondorf, seeking to prevent him from obtaining the Triforce and dooming Hyrule. The move to 3D granted the series an unprecedented sense of scale, which hits players the first time they set out across Hyrule Field – this was a huge world with lots to experience, from riding the horse Epona to entering the pit of Jabu-Jabu's belly. Time is the game's key mechanic, with Link appearing in both child and adult forms, each with different abilities – young Link can crawl through small spaces, while adult Link can use the hookshot, for example.

Much like *Super Mario 64*, *Ocarina Of Time* provided key advances in the design of 3D games. Rather than turning the game into a hybrid puzzle-platformer, Nintendo gave Link the ability to jump automatically as he reached platform edges, allowing the player to work out the puzzles without worrying about control. In order to ensure that players could fight battles adequately, Z-targeting was introduced, with players holding the Z button to lock on to an enemy and make movements relative to its position.

It isn't quite perfect – Nintendo notably addressed the design flaws around the Water Temple in the 3DS version of the game – but it's as close as anyone had seen in 1998, and launched to universal acclaim, selling over 7 million copies. As a result, *Ocarina Of Time*'s design has formed the basis of every 3D *Zelda* game released since. Those sequels have made the formula familiar, but *Ocarina Of Time* was an utterly groundbreaking game, an expansive and engrossing adventure that played like a dream – a game truly worthy of the word "epic".

Super Mario 64

DEVELOPER: NINTENDO EAD **YEAR:** 1996 **GENRE:** PLATFORM

1 ***Super Mario 64* isn't** just a great game – it changed gaming forever. For players, it was a rare treat. 2D *Mario* platformers had been straightforward affairs – even if there were hidden exits to find and a variety of abilities for Mario to use, the aim of the game was usually still to make it from your starting point to a single finishing point. *Super Mario 64*'s levels were wide environments designed for exploration, and the whole game changed around that fact. Staple enemies like Goombas were suddenly much easier to avoid and became more of a minor hindrance than a serious threat, in part thanks to Mario's new health meter. Goals, rather than being points at which the level finishes, were now tied to objectives – beating bosses, collecting red coins, winning races and so on. Each stage had multiple goals, and the sight of a well-placed star outside of your objective often caused players to pause and try to figure out how to reach them ahead of time. This non-linearity extended further, as the stars opened up new stages in batches, meaning that it was hard to ever become truly stuck.

For developers, *Super Mario 64* was a masterclass. Despite a lack of prior experience with 3D game design, Nintendo delivered a full slate of impressively designed levels, filled with challenging and inventive objectives. Even the simple act of moving Mario was a joy – the N64's boldly different control pad gave many players their first taste of the subtleties of analogue control, with a light push producing a slow tiptoe and a heavy push producing a full-on sprint. That wasn't all, as Mario gained new abilities like the triple jump and backflip, which proved useful for leaping those hard-to-cross gaps. Particularly pleasurable was the act of trying to force Mario up a hill, watching his legs working ever harder until he fell forward and slid back down.

The platform genre had a variety of competing designs in the early days of 3D, from conservative 2.5D efforts such as *Pandemonium* to the idiosyncratic approach of *Jumping Flash*. However, it's easy to forget this, as *Super Mario 64* quickly rendered almost all of them obsolete and subsequent games such as *Banjo-Kazooie* and *Gex 3D* borrowed heavily from its design. Design features we now take for granted, such as dynamic cameras, owe a heavy debt to the work of Shigeru Myamoto and his team.

All of this, and *Super Mario 64* was a launch game. It was an almost impossibly convincing reason to buy the console on day one, which remained compelling years after the hype had faded. Yes, this is your top N64 game – but there's a strong argument to be made that it is the best game ever, too.

Five Reasons Why It's Great

1 It didn't just clone the 2D gameplay, instead adapting the *Mario* experience to a 3D environment.

2 The non-linear progression of the game left players spoiled for choice when choosing the next stage to challenge.

3 The game's precise control was unlike anything else available at the time, justifying the Nintendo 64's analogue stick.

4 Sliding down an slippery icy slope while racing a penguin remains one of gaming's greatest joys.

5 The game just didnt ruddy end. Even after you had collected all 120 stars, there was still one last secret to find...

Developer Top Picks

"My favourite is *Super Mario 64*, although my kids at that time were devoted to *Pokémon Snap*"
Trip Hawkins
(Founder, EA and 3DO)

"The one that stands head and shoulders above the rest is *Super Mario 64*. It was absolutely revolutionary, getting so many things right on its first attempt and even now, three generations later, it's still as playable as it was back then"
Steve Ellis
(GoldenEye 007, Perfect Dark)

"My memories of seeing and playing it for the first time still make me smile. The design of it, the controls, the feel, the characterisation of Mario, the accessibility, the wide appeal are all things that stand out to me and make it such a fun game to play"
Mark Edmonds
(GoldenEye 007, Perfect Dark)

retro GAMER READERS' CHOICE

"If this game was released in its current form today it would still be just as well received as it was on release day, and that's the biggest compliment I can give it. I'm not sure you could say the same about any other N64 game. That's not to say they're bad – it's just that *Mario* is *that* good"

look at it sideways

遠くの稀で、エキゾチックなゲームを愛する人々のため

FULL OF EASTERN PROMISE

SIN & PUNISHMENT: SUCCESSOR OF THE EARTH

Treasure only made two games for Nintendo's 64-bit console, but each is worthy of a place in your collection. Here, Darran Jones reveals why it's hectic run-and-gun remains one of the most astonishing games to come from the talented developer

IN THE KNOW

- **PUBLISHER:** ESP
- **DEVELOPER:** TREASURE
- **RELEASED:** 2000
- **SYSTEM:** NINTENDO 64
- **GENRE:** RUN-AND-GUN
- **CAN'T IMPORT? THEN WHY NOT TRY:** *PANZER DRAGON ZWEI*

While the original *Panzer Dragoon* was a visual delight, Team Andromeda really upped the ante on its superb sequel. Like *Sin & Punishment*, *Panzer Dragoon Zwei* featured an incredible amount of inventiveness, gorgeous visuals, striking sound and terrifying end of level bosses. Best of all, it shouldn't cost you more than a tenner, so go look for it.

Interesting fact
While *Sin & Punishment* never received a Western release, it is possible to play it in full English providing you have the required plug-in that can be found at www.romhacking.net/trans/920.

» We were going to video record this stunning level for the coverdisc, then we realised we no longer made one. Doh!

メガ駆動機構

If there was any justice left in the world Coldplay would have never been allowed near instruments, George Lucas would have been strung up for tinkering with his original *Star Wars* trilogy and Treasure's utterly superb *Sin & Punishment* would be heralded as one of the greatest N64 games ever made.

Playing *Sin & Punishment* for the first time is akin to witnessing a miracle unfolding before your eyes. It's like watching a child being born into the world – it's a moment that will stay with you forever.

Indeed, *Sin & Punishment* (or *Tsumi To Batsu – Chikyuu No Keishousha* to give it its full Japanese name) is an utterly superb blaster, and some six years after its release it remains within the upper echelons of N64 hits and has become yet another feather in Treasure's painfully overloaded cap.

Super Mario 64 may have been a three-dimensional stroke of genius, and Link's first 3D adventure rightly deserved every accolade that was bestowed upon it, but in our minds Treasure's magical opus is every bit as important and deserves just as much praise as its better known peers – even if it is just an on-rails shoot-'em-up.

To say *Sin & Punishment* was an aesthetic delight is an understatement of the highest degree; even today its jaw-dropping visuals and pulsating soundtrack will leave you giddy and make you wonder just how on earth Treasure actually managed to make the N64 look just so damn good. Sure, the smear-o-vision that all N64 games were unfortunately prone to suffer from is still present and correct, but even poor output can't hide the majesty of Treasure's sumptuous shooter. *Wave Race* may have boasted sublime water physics that allowed you to practically

GAMES FROM THE EAST WHICH NEVER MADE IT TO UK SOIL

» One of the later stages sees you donning a huge suit and taking on one big-ass boss in the spectacular end of stage battle.

» When this girl gets bored off hurling soldiers at you'll she'll start flinging bloody great pieces of metal. Careful now.

» She may not look all that but wait until you see her in motion.

feel every bump and swell, and *Lylat Wars* perfectly captured the atmosphere of Lucas' aforementioned space opera, but nothing sung on the N64 like *Sin & Punishment*. As it had done with Sega's Mega Drive and Saturn, Treasure (with a little help from Nintendo's R&D) pushed the N64 to its limits and delivered some of the most astounding visuals to ever grace the machine. From the very moment your character races into the screen and starts destroying enemies with gay abandonment the action doesn't back down for a second. *Sin & Punishment* races along at a blindingly smooth pace and never falters in its efforts to amaze and astound.

Spectacular explosions fill the screen, impressive lighting effects showcase Treasure's fantastic levels and stage design, while the many bosses that are thrown at you will cause your jaw to drop. If *Sin & Punishment* can be summed up in one stage though it has to be the gravity-defying aircraft carrier level. Floating around on a huge piece of metal, your on-screen persona mows down wave after wave after wave of enemies while the entire level constantly spins and rotates around him; it's an absolutely stunning effect and will make you question if you're actually playing a N64 game – it really is that good. Of course, all this technical wizardry came at a price, and the only downside to *Sin & Punishment* is that everything features a very low poly count and can look rather basic. It was a tricky choice that Treasure obviously had to make (detail over smoothness) but it made the right decision. And besides, there's so many spectacular effects going on you won't really notice anyway.

» Weave your way through the bullets and fill that boss with hot plasma.

For all its graphical splendour, *Sin & Punishment*'s gameplay, while simple, was no less impressive and made full use of the N64's ergonomically designed controller. Aiming was handled via the analogue stick, while the Z trigger was used to fire (or doubled up as a handy sword if an enemy strayed to close too you). Due to its on-rails nature, character movement was handled by the left and right C buttons, while a double tap of said buttons enabled you to execute a nifty roll – very handy for getting out of tight situations. It was also possible to jump or double jump and Treasure had also included an option for either left or right-handed players (very useful). The intuitive control system enabled you to quickly grasp the controls and simply get down to creating as much on-screen carnage as possible. While Treasure had included a reasonable plot and decent voice acting (all in English) it was the inventive gameplay, level design and subsequent replay value that proved to be *S&P's* real draw.

Despite its restrictiveness, Treasure's game gave you the impression of being far more open than it was and variety was used to ensure that you never got bored enough to question the linear levels that you were racing through. As a result boss encounters featured heavily throughout *Sin & Punishment*'s short running time (it can be bested in a few hours) and each and every battle was a joy to play, even if they did give a sly wink to past Treasure titles. It didn't matter though, Treasure has invigorated *Sin & Punishment* with the sort of instant accessibility that had once been seen in the likes of *Space Harrier* and *After Burner* and while the game itself was far from original, it had been created with such obvious excitement that you couldn't help but fall in love with it. 16 years later and the relationship is still going strong.

私を読み、私に書くことができ、私に知らせれば好みのゲームはある

BANJO-KAZOOIE

Rhyming witches, annoying sidekicks, short-sighted moles – Banjo-Kazooie had it all. Join Retro Gamer as it uncovers the secrets behind one of the greatest N64 platformers ever made

"PROJECT DREAM STARTED OFF LIFE AS AN ADVENTURE GAME ON THE NINTENDO SNES" GREGG MAYLES

Spend any amount of time talking to Rare's Gregg Mayles (now creative director) and Chris Sutherland and it becomes obvious that they genuinely love the games they get to create. It's a fact that becomes continually apparent when we were lucky enough to talk to them about the conception of *Banjo-Kazooie*, easily one of Rare's best N64 titles. Of course when you consider that this is the same Rare that was also responsible for such N64 hits as *GoldenEye*, *Blast Corps*, *Conker's Bad Fur Day* and *Perfect Dark*, *Banjo*'s enduring success becomes even more impressive. And to think that when development on *Project Dream* (as it was originally known) first began the affable Banjo wasn't even in it!

"It was definitely a convoluted route," laughs Gregg as he begins the story of one of videogaming's favourite bears.

» Grotbags eat your heart out. Gruntilda, chief nemesis of Banjo, stealer of bears and part time nose picker.

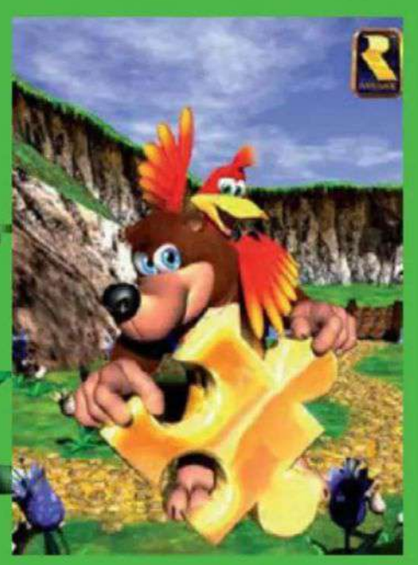
"Contrary to what many people would like to think, we didn't just have a flash of inspiration one day and say 'Right, we are going to make a humorous 3D platform adventure game featuring a affable bear in tight yellow shorts carrying a mouthy bird in a blue backpack'. The main character in *Project Dream* was initially a boy called Edison, but we felt he was too generic. So then we tried a rabbit character (that oddly ran on two legs) and then a bear. People liked the bear, the bear became Banjo, *Project Dream* became *Banjo-Kazooie* and *Banjo-Kazooie* was born."

As Gregg has already mentioned, before the lovable Banjo came along, Rare's focus was on a young boy named Edison. But what was the story behind *Project Dream* and how exactly did the main character change from a traditional homo-sapien to an ursine? "Well, *Project Dream* originally started off life as an adventure game on the Nintendo SNES," reveals Gregg. "Edison was a boyish adventurer who inadvertently got tangled up with a bunch of no-good (but inept) pirates, led by Captain Blackeye. It was the game that the original *Donkey Kong Country* team started on after they had finished *Donkey Kong Country 2*, and it took the ACM graphics technology to the next level. The introduction of the Nintendo 64 made ACM obsolete, so we switched development over to the new machine after only a few months. Dream continued for around another year, before we realized that the scope of the game and the early choices we had made regarding technology meant it was going to take many years to complete. By this time, the main character of *Dream* had become a bear who wore a backpack purely to keep his adventuring items in. We liked the bear and wanted to make a more action-based game that centered purely on him and his abilities."

Banjo may well have gone through quite a few changes before reaching its final state, but the move from 16-bit SNES to Nintendo's 64-bit console didn't prove to be that much of a headache, as Chris Sutherland (*Banjo*'s Lead Programmer) explains. "Luckily, we were able to carry over a lot of the supporting code from *Dream*, which meant that we were able to complete *Banjo-Kazooie* in less than 15 months," he reveals. "Interestingly

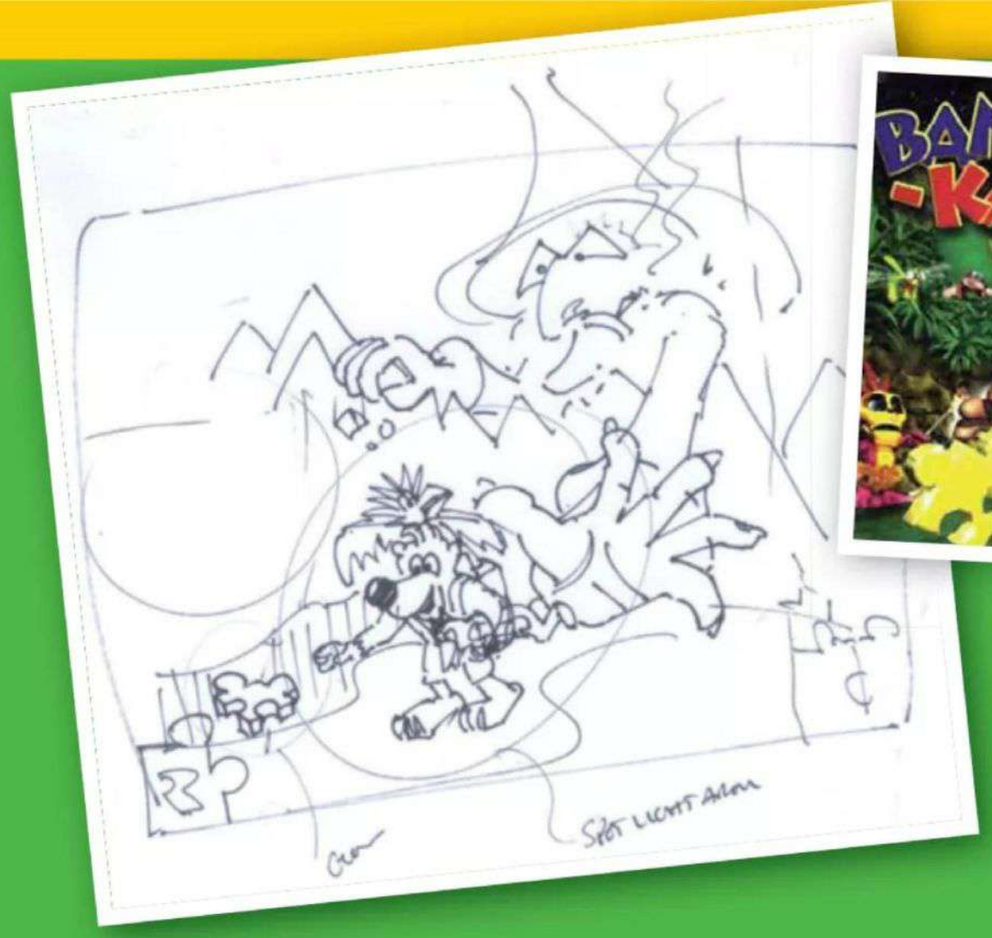
IN THE KNOW

- **PUBLISHER:** NINTENDO
- **DEVELOPER:** RARE
- **RELEASED:** 1998
- **SYSTEM:** NINTENDO 64
- **GENRE:** PLATFORM ADVENTURE



» *Banjo Kazooie's* hub was huge and gave you an early impression of its sheer size.

» Once all the missing pieces had been found a new level would open up to you.



» An early concept sketch of the original artwork and how it ended up once it hit retail shelves.

GETTING JIGGY WITH IT

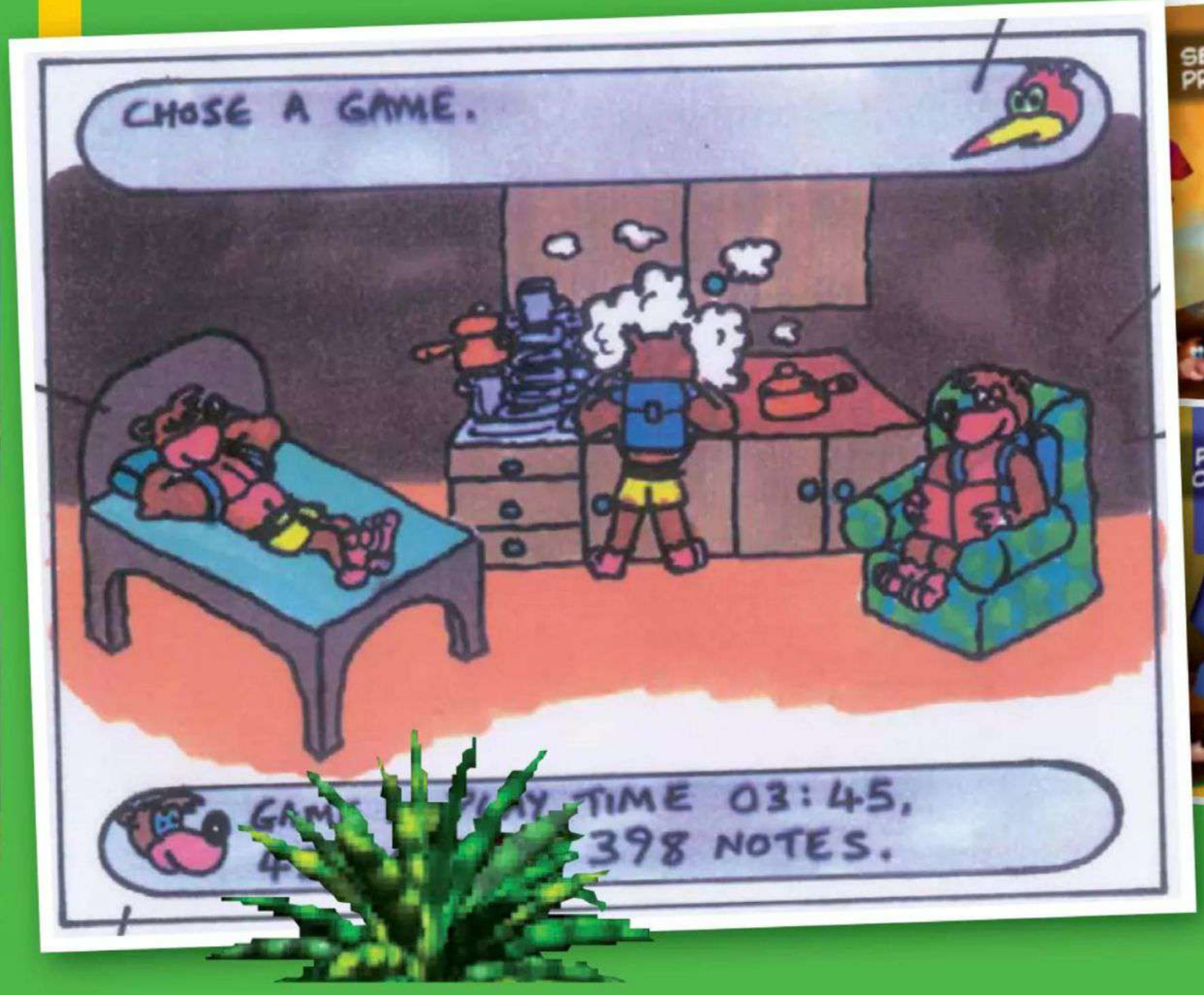
One thing that set *Banjo* apart from many other platformers was the sheer amount of different items you had to collect. Unlike other games of its ilk though, the objects in *Banjo* actually had a purpose. "Every self-respecting platform game hero has to have something to collect, but we wanted something that rather than being just a shiny object, was a shiny object that could actually be used for something," begins Gregg. "The desire to have a direct connection between this shiny object and opening up the worlds led to completing pictures of the worlds like a jigsaw, which in turn led to the missing pieces being the Jiggies. Jinjos came from a years-old idea (dating back to *Donkey Kong Country*) of having a 'hard-to-collect collectable' – one that would run away or camouflage itself instead of dumbly sitting around waiting to be collected. Funny how things turn out, as the Jinjos never ran away and even whistled to attract your attention! Actually, they were probably the dumbest collectable ever. The Feather, Eggs, Notes and Honey on the other hand were simply themed around Banjo, Kazooie and the game's musical theme."

there were two months prior to that where we experimented with using the *Dream* visual technology to create the game, then we altered our approach to better accommodate the design."

With so many alterations made to *Banjo-Kazooie* over its 17-month gestation period, it's perhaps surprising to realize that it was put together by a relatively small group of coders… "We initially started with about ten people then grew to 15 by the end," confirms Gregg, who was *Banjo*'s Lead Designer at the time. "We had seven engineers, five artists, two designers and one musician. The leads in all four disciplines are still going strong at Rare, having worked on *Grabbed By The Ghoulies*, *Viva Piñata* and now Banjo's new adventure, which will be appearing on the Xbox 360."

Once *Project Dream* was officially no more and work began on *Banjo* in earnest, gamers worldwide were eager to see how Rare's latest platformer would turn out. After all, with the *Donkey Kong Country* trilogy proving to be so popular on the SNES, it was perhaps expected that Rare's first platformer for the N64 was going to be just as good. After creating such a successful series of hits on its 16-bit console, we were interested to know if there was there any pressure from Nintendo to ensure that the same magic happened on the N64? "Oh not at all," begins Gregg. "Nintendo never put any pressure on us to achieve success. I think that if you aim specifically for success it is much harder to achieve. Creating a game to the best of our ability that we hope will be successful is a far better approach. Nintendo, like Rare, only wanted to release the best games possible, so I guess you could say we put ourselves under pressure to deliver a great game. Of course, not all

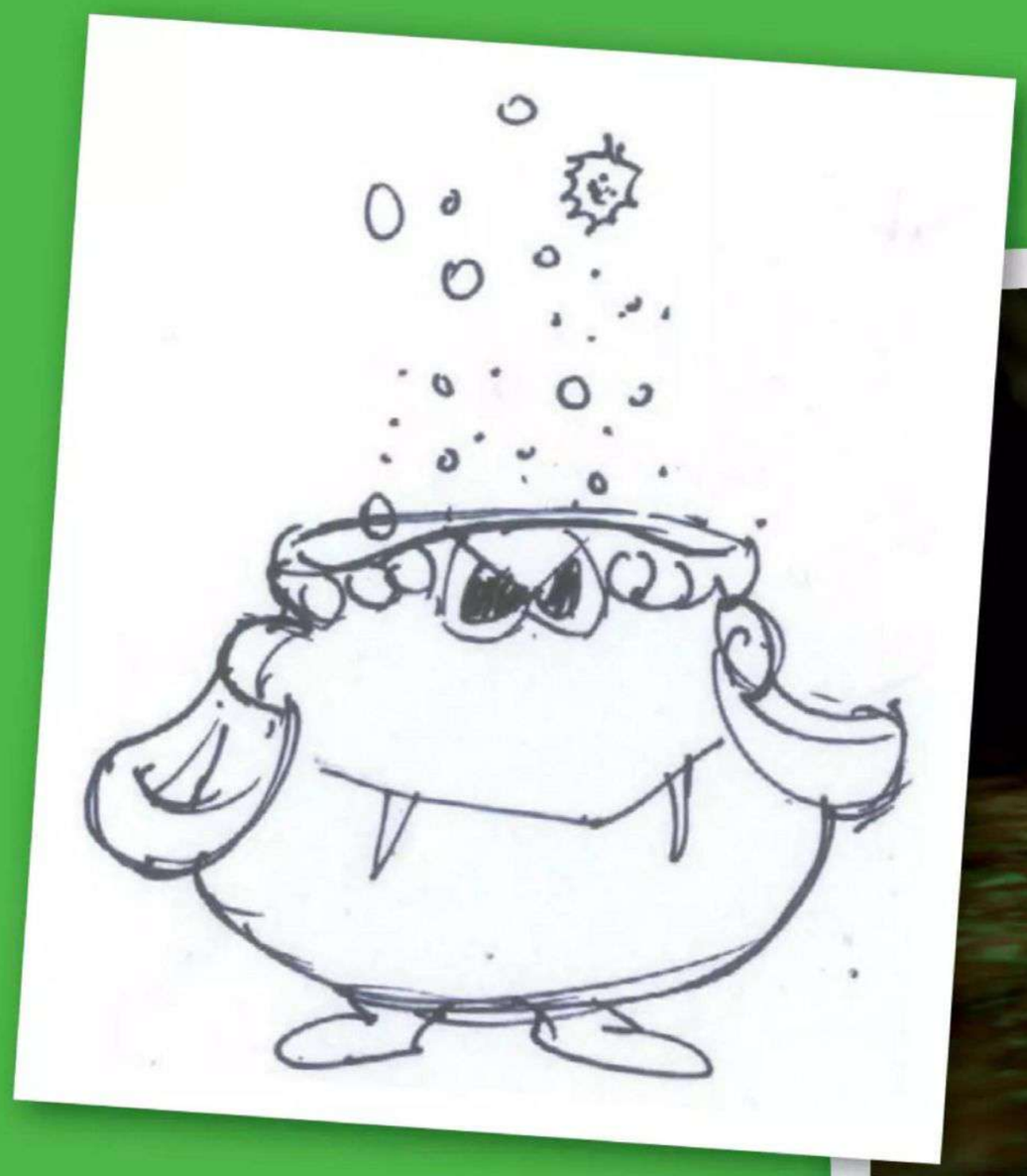
"NINTENDO HAD A DIFFICULT TIME UNDERSTANDING THE SELF-DEPRECATING HUMOUR AND NEVER-ENDING TORRENT OF SARCASM THAT KAZOOIE CONSTANTLY DISHED OUT"
GREGG MAYLES



» As you can see from this original sketch these final N64 loading screens are extremely similar to the art that originally inspired them.

» Once you found the red launch pad it was possible to take to the air. All the better for exploring *Banjo*'s beautiful worlds.

» Swimming sees the music softening and lots and lots of bubbles.



» An early sketch of the warping Dingpot, and how it eventually looked in the finished game.

great games are successful, but we were fortunate that *Banjo* was considered both a good game and a very successful one."

Indeed, *Banjo-Kazooie* proved to be an incredible success, and while it was unable to match the 8 million sales that Rare's *GoldenEye* had achieved, it ended up receiving impressive scores from virtually every magazine and website that reviewed it. In fact, in the eyes of many gamers, here was a platformer that finally managed to improve on the majesty that was Miyamoto's *Super Mario 64*. We were keen to know if Rare had ever planned on making a '*Mario 64* beater' from the very beginning. "Not really," states Chris. "Setting out with the intention of making an 'improved version' of another game would be quite uninspiring to work on, so that's not something we've ever done," he explains. "Instead you have to create your own path and follow that – certainly you can take inspiration from other games and *Mario 64* was just one of those games."

But what did Nintendo think about *Banjo-Kazooie*? And did it ever have a say in the direction it would end up taking. After all, we could imagine that Miyamoto was watching the project with quite a lot of interest. "There's was very little actually," confirms Gregg. "Seeing that *Banjo* was actually Rare's creation, we didn't have to show Nintendo what we were doing until we were happy the game was what we wanted it to be. I think that some people at Nintendo had a difficult time understanding the self-deprecating humour and never-ending torrent of sarcasm that Kazooie constantly dished out, although this didn't prevent the game from becoming popular in Japan. Every 3D platform game owes a respective nod to Nintendo and Miyamoto-san, and for anyone to even compare *Banjo* to the piece of gaming history that was *Mario 64* is a great honour indeed."

Rare may have not set out to create a '*Mario 64* beater' but it's obvious that the two games do share some common traits. Impressive cameras, a variety of memorable characters and plenty of inventive levels to explore are just a few of the similarities to be found in the two classic titles. One area where Banjo did have the edge though was in its special moves. While Mario was no slouch in the wall-jumping and somersaulting departments, he couldn't hope to compete with the dazzling array of specials that Banjo and Kazooie had access to. As well as traditional bottom slams and double-jumps, the dynamic duo were also able to shoot eggs at opponents, use Kazooie's beak to peck at enemies and even flip through 180 degrees, so Kazooie could use her long legs to climb surfaces that were too inclined for Banjo to access. Although the pair worked beautifully together, like Banjo, Kazooie's involvement in the game came at a much later stage.

"Initially Kazooie didn't even exist; it was just Banjo on his own," reveals Gregg. "During the planning of Banjo's abilities, we thought it would be a good idea if he had a traditional 'double-jump', so that he could get himself out of mid-air trouble and also cover greater distances. The problem was that just activating a second jump in mid-air looked rather odd – a way was needed to make it look more believable. We came up with the (looking back, extremely wacky) idea that a pair of wings

» Lose all your lifes and you'd witness this amusing cutscene.

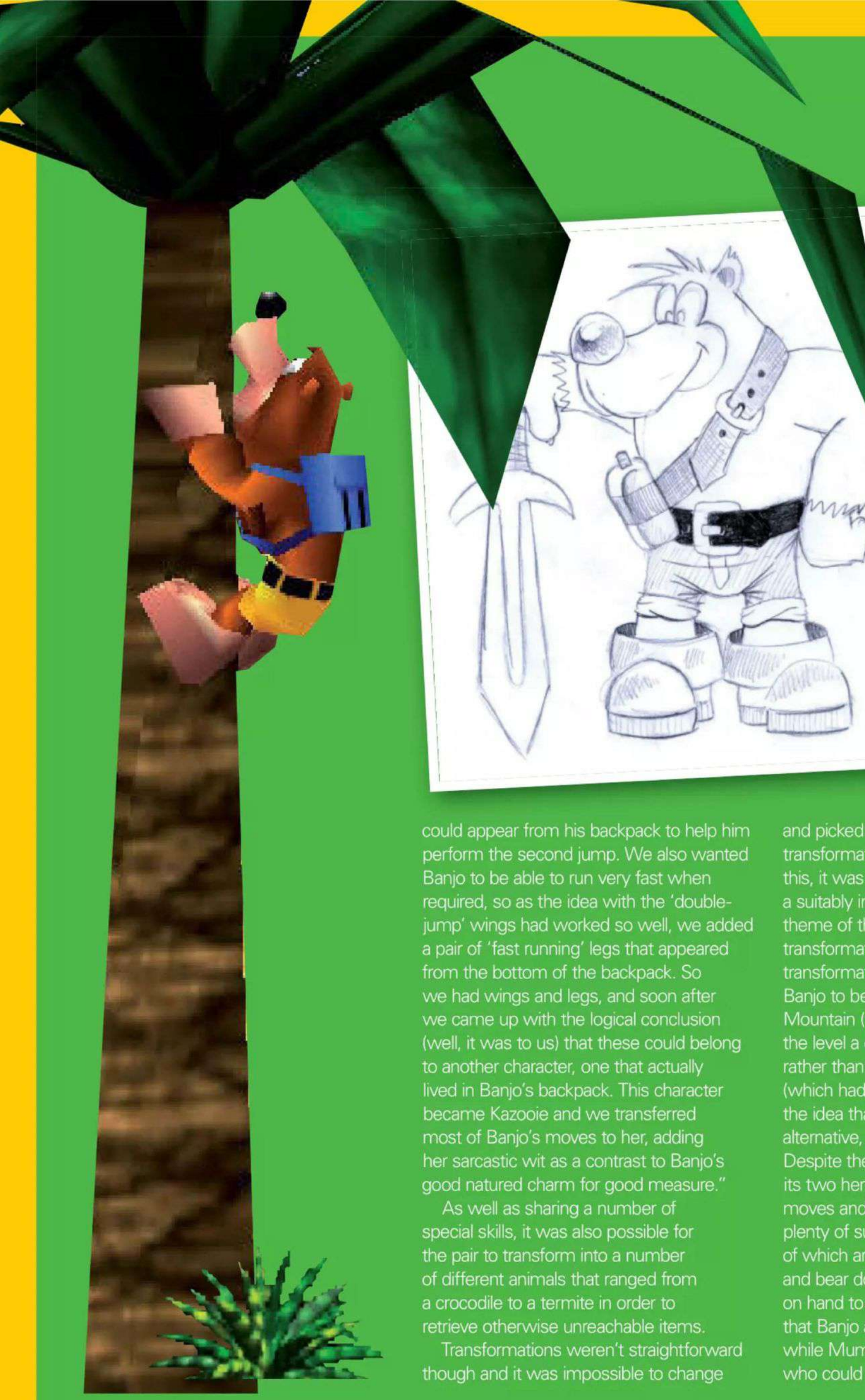
» A very early shot of how Project Dream initially looked on the N64.

DEVELOPER HIGHLIGHTS

SABRE WULF
SYSTEMS: AMSTRAD, BBC, COMMODORE 64, ZX SPECTRUM
YEAR: 1984

DONKEY KONG COUNTRY
SYSTEMS: SNES
YEAR: 1994

DIDDY KONG RACING DS
SYSTEMS: NINTENDO DS
YEAR: 2007



could appear from his backpack to help him perform the second jump. We also wanted Banjo to be able to run very fast when required, so as the idea with the 'double-jump' wings had worked so well, we added a pair of 'fast running' legs that appeared from the bottom of the backpack. So we had wings and legs, and soon after we came up with the logical conclusion (well, it was to us) that these could belong to another character, one that actually lived in Banjo's backpack. This character became Kazooie and we transferred most of Banjo's moves to her, adding her sarcastic wit as a contrast to Banjo's good natured charm for good measure."

As well as sharing a number of special skills, it was also possible for the pair to transform into a number of different animals that ranged from a crocodile to a termite in order to retrieve otherwise unreachable items.

Transformations weren't straightforward though and it was impossible to change into a new form unless you had collected the required number of Mumbo tokens that were carefully hidden throughout the massive game worlds. Once you had enough, Mumbo Jumbo would use his voodoo magic and you could continue to explore Banjo's nine huge levels from a brand new perspective. "The actual transformations were dictated by the level design," explains Chris. "Once all the level themes had been decided upon (which was done before work on the first one commenced) we looked through them and picked the ones where we thought the transformations would be most suited. After this, it was just a matter of coming up with a suitably interesting transformation for the theme of the level and what abilities the transformation could have. The idea for the transformations came about from wanting Banjo to be made small on Mumbo's Mountain (the first level) so that it gave the level a different sense of scale. But rather than just shrinking the main character (which had been done before) we hit upon the idea that he could be changed into an alternative, equally small form – the Termite."

Despite the main focus of *Banjo* being on its two heroes and their array of special moves and transformation skills, there were plenty of supporting player characters, many of which are just as memorable as the bird and bear double act. Bottles the mole was on hand to explain the many new moves that Banjo and Kazooie would gain access to, while Mumbo Jumbo was a Witch Doctor who could transform Banjo into a variety of different beasts, thus helping the loveable bear to complete specific tasks in his new guises. Perhaps the most memorable character of all though was Gruntilda the witch, a vain, evil hag with a penchant for speaking in rhyme and capturing Banjo's sister Tooty at the beginning of the game, an act that spurs Banjo into undertaking his epic adventure. With all the characters having such distinct personalities, we asked Gregg if they had been based on anyone in real life – the Stamper brothers perhaps? "Banjo and Kazooie no, but Bottles could be likened to the typical clever kid in every school that wore really thick glasses – hence the Bottles family all having slang terms for such spectacles as their names," confirms Gregg. "Gruntilda on the other hand was inspired by Grotbags, the bumbling incompetent witch from *Emu's Pink Windmill Show*."

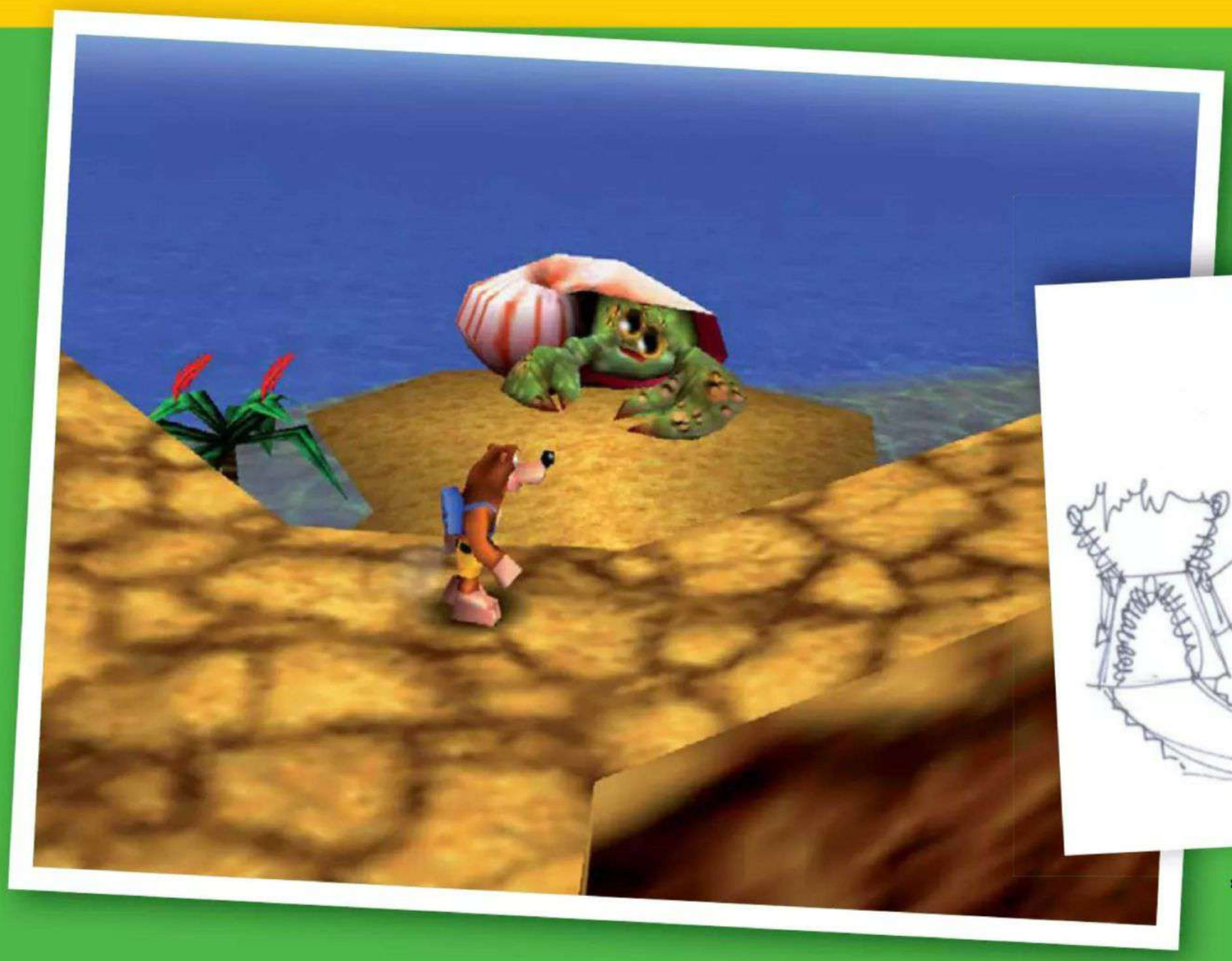
» The beginning of Treasure Trove Cove. Return here to return to the main game hub.

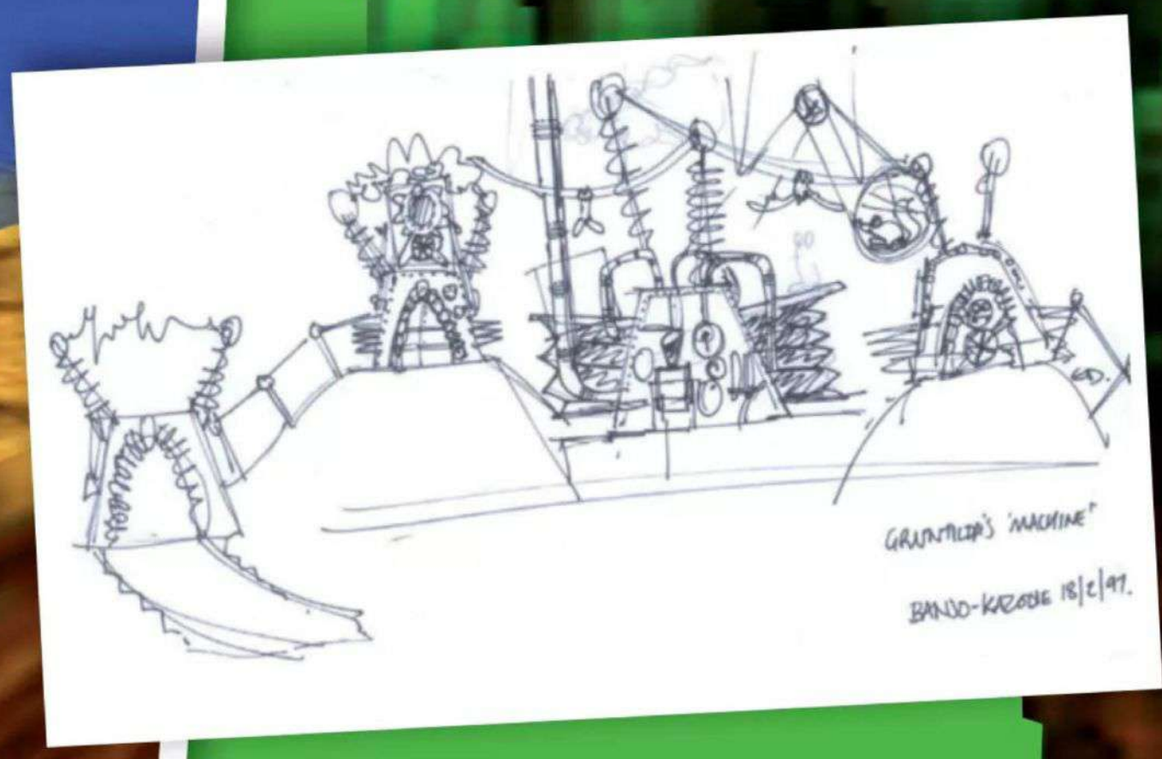
Darn, so the rumours of Chris Stamper carrying his brother round the Rare offices on his back are obviously untrue then…

Perhaps one of the reasons why gamers shared such an affinity with Banjo and Kazooie was because of the charming way that they communicated with each other and the other residents of Banjo's world. Like the *Zelda* games, there's no real speech to speak of, just some rather cute mumbling that perfectly suits the cartoony nature of the game. "One of the things you have to remember is back then speech for games

"ELEMENTS OF FUNGUS FOREST EVENTUALLY FOUND THEIR WAY INTO DONKEY KONG 64, WHILE MOUNT FIRE EYES WAS INCORPORATED INTO BANJO-TOOIE AS HAILFIRE PEAKS" CHRIS SUTHERLAND

» Banjo's double-jump proved to be extremely useful for timing jumps properly.





» **Left:** He looks menacing, but this giant hermit crab is easy to defeat and hides a golden secret. **Right:** An early sketch of Gruntilda's transformation machine.

was still in its relative infancy, and less than convincing speech heard in some games made us feel that it didn't really add to the experience," explains Gregg when questioned about the characters' distinct voices. "We didn't want to ruin player's perceptions of the characters by getting their voices wrong, but we did want the characters to be heard – so we hit upon a compromise. The mumbling allowed us to convey the personality of the characters without them actually speaking, and of course was very easy to implement. It also added a certain endearing charm that a lot of players have commented on and it was something that made the game unique."

It wasn't just the voice characterization that made *Banjo-Kazooie* stand apart from its peers. It also just happened to open with one of the most hilarious musical intros the videogaming world has even seen, and even today it never fails to raise a smile. Knocking on the screen to get your attention, Banjo immediately launches into an amazing hoedown that sees him joined by sister Tooty, the annoying Kazooie and Mumbo Jumbo, who constantly outplays Banjo, much to the bear's frustration. It's a delightful sequence that fully sums up Rare's legendary status on the N64 at the time, but where did the idea originate?

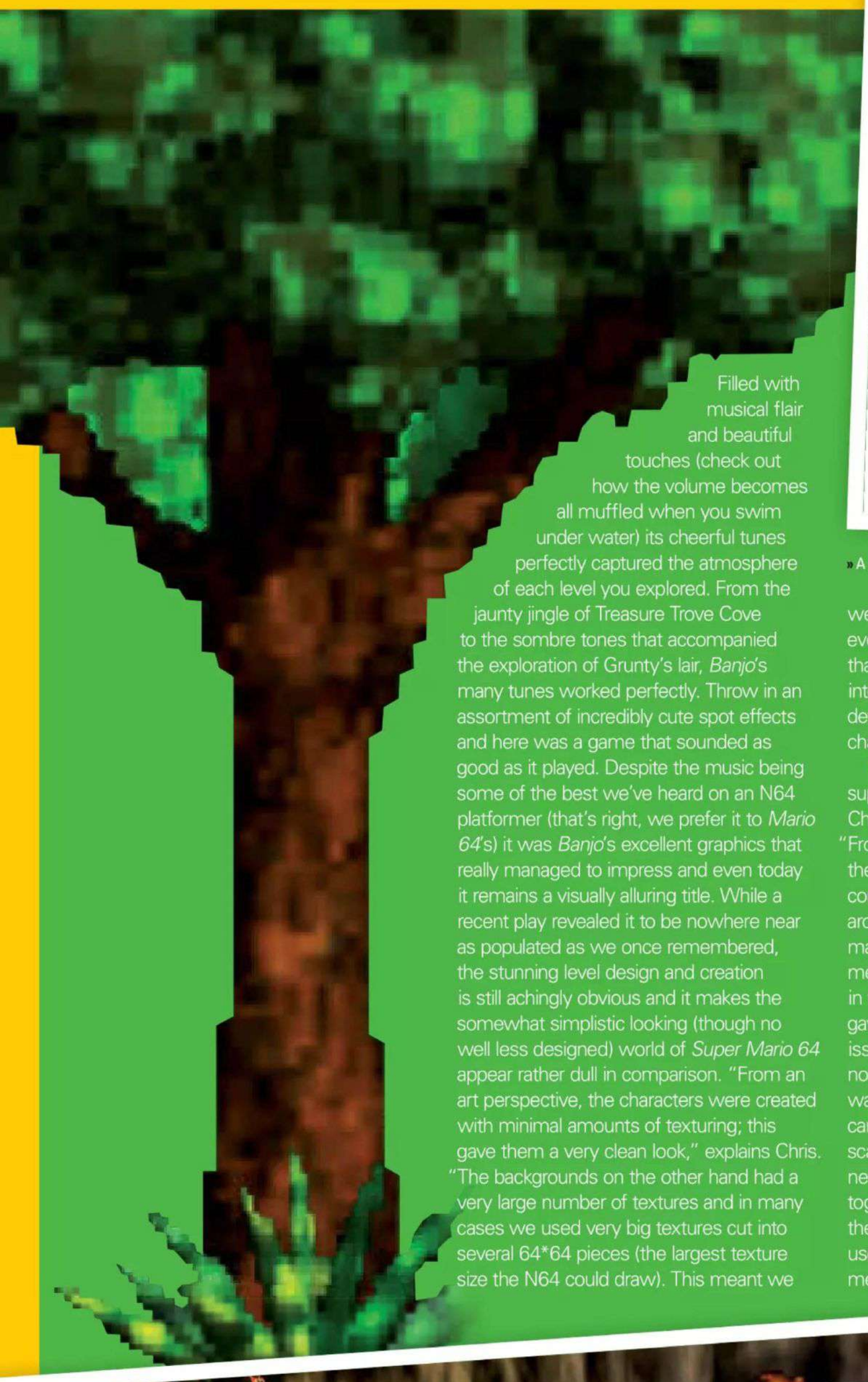
"Well, only Banjo had a name to begin with and someone remarked that if he was called Banjo he should play one," begins Gregg. "In order for his bird companion to fit in musically (and so they could play a duet for some as yet unforeseen reason which eventually became the hoedown) we gave her a Kazoo and named her after it. A Kazoo was chosen, as it can be a really annoying instrument, much like the personality of the bird. Unfortunately, we had trademark problems with Kazoo, so we changed it to Kazooie. Tooty and Mumbo were given instruments for no reason other than it allowed them to join in with the hoedown and be introduced to the player before they even started the game. We actually tried a similar tongue in cheek approach with the 'DK Rap' at the start of *Donkey Kong 64* (which coincidentally featured Banjo's lead engineer as one half of the rapping duo during a break from coding and supplying voices for Banjo and Kazooie), but this was received with less affection as people thought we were trying to be serious. I think Grant (Banjo and *DK64*'s musician) is still bitter about this to the current day – in fact I'm sure he'll have something to say about it, yet again, when he reads this."

As can be expected from a game that starts off with a 'duelling banjos-styled' hoedown between a competitive bear and witch doctor, *Banjo-Kazooie* happened to have an extremely memorable soundtrack.

» **Above:** The original false ending that never appeared in the final game.

HOEDOWN SHOWDOWN

It's one of the funniest openings in any videogame so we thought we'd show you *Banjo*'s classic hoedown in all its glory. Ooh, we really spoil you sometimes.



Filled with musical flair and beautiful touches (check out how the volume becomes all muffled when you swim under water) its cheerful tunes perfectly captured the atmosphere of each level you explored. From the jaunty jingle of Treasure Trove Cove to the sombre tones that accompanied the exploration of Grunty's lair, *Banjo*'s many tunes worked perfectly. Throw in an assortment of incredibly cute spot effects and here was a game that sounded as good as it played. Despite the music being some of the best we've heard on an N64 platformer (that's right, we prefer it to *Mario 64*'s) it was *Banjo*'s excellent graphics that really managed to impress and even today it remains a visually alluring title. While a recent play revealed it to be nowhere near as populated as we once remembered, the stunning level design and creation is still achingly obvious and it makes the somewhat simplistic looking (though no well less designed) world of *Super Mario 64* appear rather dull in comparison. "From an art perspective, the characters were created with minimal amounts of texturing; this gave them a very clean look," explains Chris. "The backgrounds on the other hand had a very large number of textures and in many cases we used very big textures cut into several 64*64 pieces (the largest texture size the N64 could draw). This meant we were able to avoid having tiling textures everywhere. Also we used a decal technique that allowed us to blend areas of textures into one another. Overall having a very detailed background mixed with clean simple characters created a great visual contrast."

HUTS ON PLATFORMS SECTION
JIGGY IN THIS ONE
EGG CROC
BRIDGE BETWEEN HUTS 3 AND 4. HUT 4 HAS A BANJO BIG HEAD. THAN A SHOCK JUMP ICON IN IT.
HEAD ACTS AS STEPPING
BANJO CLIMBS BIG BUILDINGS
RING OF SAFETY PLAYS FROM IF FALL IN SWAMP
SHOCK JUMP ICON
1) JUMP ON HUT TO REVEAL SHOCK JUMP ICON
2) USE SHOCK JUMP ICON TO SPRING UP TO NEW FLAT AND REPEAT SEQUENCE

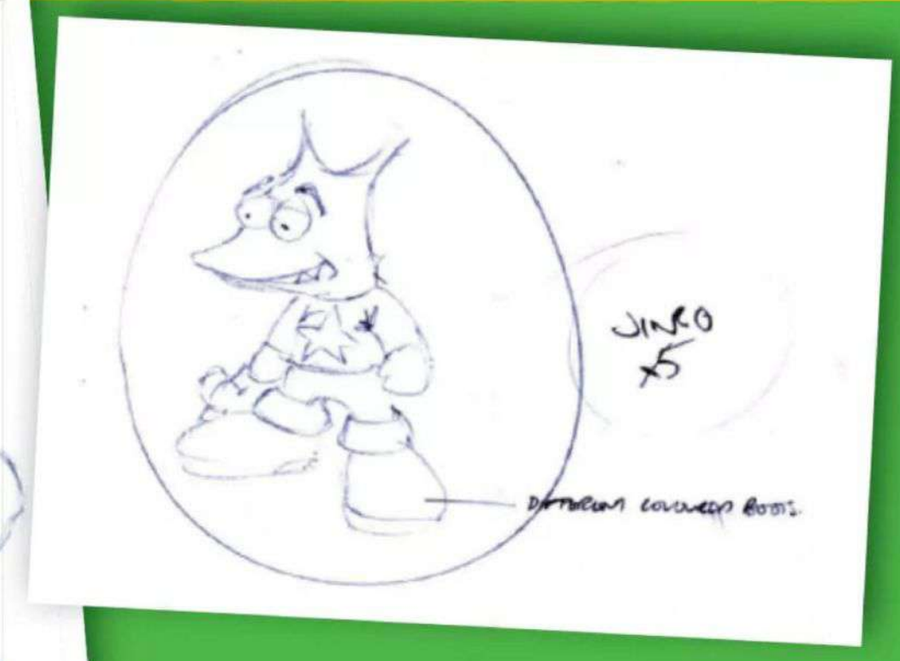
» A great amount of work went into the design of each level.

While the end result was undeniably superb, the complex visual look provided Chris with more than a few headaches… "From a software perspective, we pushed the memory of the system very hard," continues Chris. "As you move the camera around the map in *Banjo-Kazooie*, the machine is constantly throwing out of memory things you can't see and pulling in the scenery that appears into view. This gave us major memory fragmentation issues ("fragmentation", to try to give a non-technical analogy, is like when you want to place a big box on your desk, but can't because there's too much paperwork scattered around it. To fix this, you first need to move all the little bits of clutter together to create a big enough space, then you can place the box down). We used a proprietary system that "reshuffled" memory continuously as you played to eliminate the fragmentation. I'd doubt many N64 games of the time did anything like that – overall it meant we could dedicate a higher number of polygons to the characters and backgrounds than many other games at the time managed."

It may have pushed the machine to its limits but the results were there for everyone to see. Each of *Banjo*'s nine levels may have been based on the sort of environments that had appeared in countless other platform titles, but clever level design and familiar themes made the outlandish looking locations instantly recognizable. "We wanted players to be able to travel to places that were larger than life, but still relatively believable in a fantastical way. Once a theme for a world had been chosen, we brainstormed as many ideas as possible that you would expect to see in such a location, then used these ideas to shape the world, before adding a twist of humour as the finishing touch. Taking Treasure Trove Cove as an example, we wanted everything possible that you would imagine a desert island to have – crabs, pirates, a wrecked ship, a sandcastle, a lighthouse and treasure (where X marks the spot of course)."

While nine huge worlds to explore seemed more than generous, Rare had actually intended to include several more. Unfortunately, time constraints meant that levels like Hammerhead Beach and Fungus

» **Left:** Bottles was a short-sighted mole who would teach you new special moves.
Right: These green pads would allow Banjo and Kazooie to leap even higher than usual.



» **Left:** An early sketch of a Jingo, and above, how they ended up.

Forest were cut out. They didn't disappear forever though… "It's easy to think up more ideas than are necessary or possible," continues Chris when we asked him about the infamous missing levels that never made it into the final game. "Fungus Forest and Mount Fire Eyes were additional levels that weren't needed, whereas I think Hammerhead Beach was something to do with the fabled Stop 'n' Swop. Elements of Fungus Forest eventually found their way into *Donkey Kong 64*, while Mount Fire Eyes was incorporated into *Banjo-Tooie* as Hailfire Peaks. There were also other ideas for levels that were transferred to the sequel – Glitter Gulch Mine (mine) and Witchyworld (fairground)." So if you had to drop several levels was there anything else that failed to make the final cut? "Definitely," continues Chris when we press him for more juicy info. "We had actually planned a surprise ending and additional game mode. After the mighty Jinjonator had pummelled Grunty into submission atop her tower, the witch's final spell projectile intended to hit Banjo and turn him into a frog. The player would then have gained control of the rescued Tooty, who then had to search through the levels to find enough 'Mumbo Tokens' to transform Banjo back into his normal ursine self. This mode was dropped due to time constraints, Grunty's spell was changed so it missed and the idea for the Mumbo Tokens was eventually used in *Banjo-Tooie*."

Even though several elements never made the final cut of Rare's excellent platformer, *Banjo-Kazooie* proved so popular that a sequel, *Banjo-Tooie* was released two years later, and while it once again received exceptional reviews from the gaming press, Gregg is the first to admit that that final product is far from perfect. "Even though we thought that *Banjo-Tooie*'s more complex and interlocking worlds were better than those of the original, many fans still believe that *Banjo-Kazooie* was the better game due its simpler structure," he explains to us. " I would say we got the balance right the first time and perhaps made the all too common mistake of wanting bigger, better and more for the sequel."

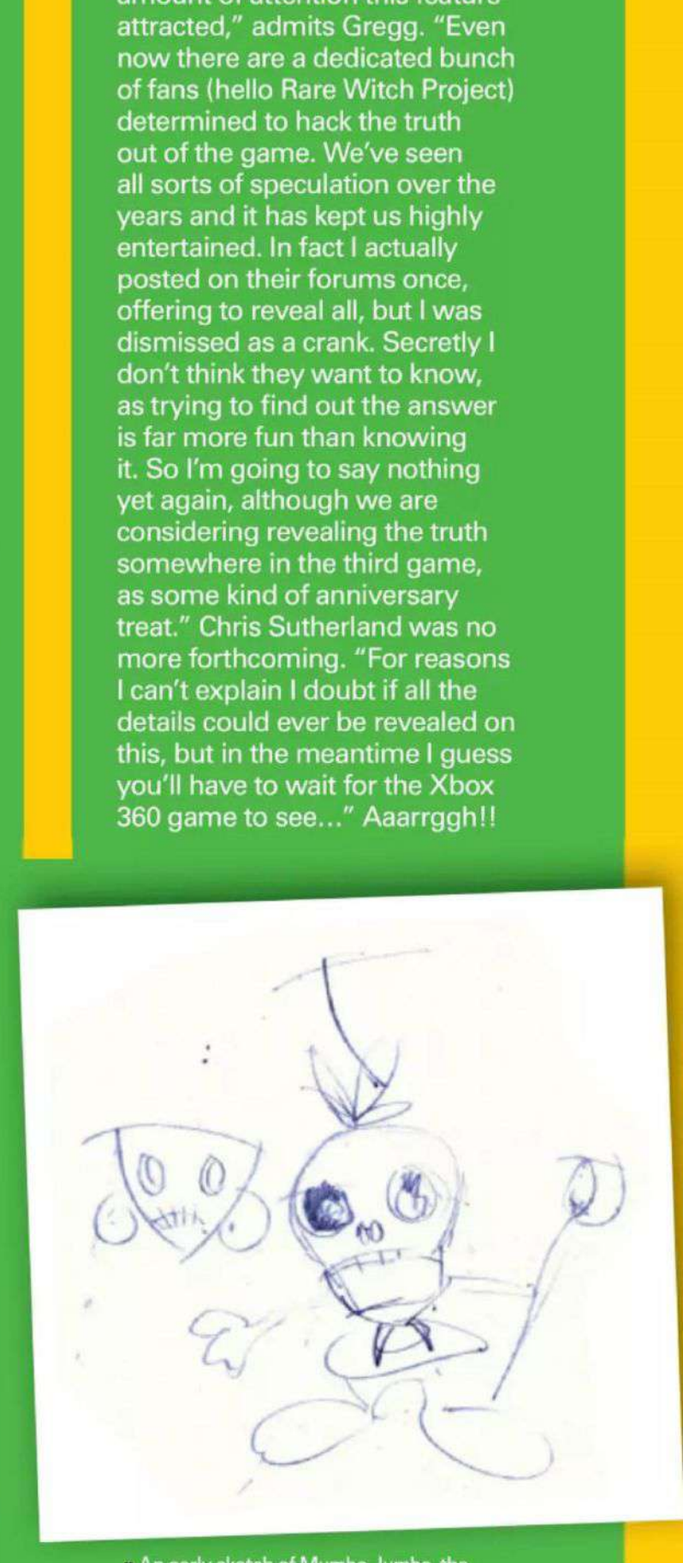
Some gamers may not have preferred Banjo's second adventure, but that doesn't mean that the franchise is forgotten and Rare went on to release a new game, *Banjo-Kazooie: Nuts & Bolts* in 2008. While some didn't like the vehicle building-based gameplay that Banjo and Kazooie's exploits were based around, an amusing video that was released at X06 proved that Rare had lost none of its trademark humour, all of which was found in the final game. Back when we interviewed them before the game's release, the team was confident about their new take on the platform genre as Gregg told us: "Our aim is to take the 3D platform adventuring game into the next generation and do something more than just adding polygons. Some fans look back fondly and want more of the same, but the *Banjo* of yesteryear has no real place in tomorrow's market on the Xbox 360. What we want to do is retain all the elements that made the first two games so loved, but also try things that breathe new life into a genre that has sadly been neglected for many years. I think old and new fans alike will love it (although let's face it, I would say that)." While Gregg was obviously reluctant to reveal more about Rare's latest project, his love for the series is evident for all to see and it's fitting perhaps that he gets the last word on why he feels the game remains so loved. "We built *Banjo-Kazooie* on a combination of dysfunctional characters, variety of gameplay, humour and impressive locations – I can only assume that some of these are what gamers remember. I certainly hope so, as we have plenty more of all of these to come!"

» Here's a look at the trailer for *Banjo-Kazooie: Nuts & Bolts* that made its debut at X06. Showing the pair's attempts to get past a locked door, it perfectly captures the quirky humour of the original game.

STOP 'N' SWOP TILL YOU DROP

One of the most infamous stories surrounding *Banjo Kazooie* is its fabled Stop 'N' Swop, which would, allegedly, have allowed data to be transferred between both *Banjo-Kazooie* and its sequel *Banjo-Tooie.* Over the last nine years Stop 'N' Swop has been the subject of much speculation on a number of forums and, sadly, it would appear that Rare is in no hurry to reveal the actual truth behind it. Not just yet anyway…

"We couldn't believe the amount of attention this feature attracted," admits Gregg. "Even now there are a dedicated bunch of fans (hello Rare Witch Project) determined to hack the truth out of the game. We've seen all sorts of speculation over the years and it has kept us highly entertained. In fact I actually posted on their forums once, offering to reveal all, but I was dismissed as a crank. Secretly I don't think they want to know, as trying to find out the answer is far more fun than knowing it. So I'm going to say nothing yet again, although we are considering revealing the truth somewhere in the third game, as some kind of anniversary treat." Chris Sutherland was no more forthcoming. "For reasons I can't explain I doubt if all the details could ever be revealed on this, but in the meantime I guess you'll have to wait for the Xbox 360 game to see…" Aaarrggh!!



» An early sketch of Mumbo Jumbo, the coolest saxaphone player ever.

"WE WANTED PLAYERS TO BE ABLE TO TRAVEL TO PLACES THAT WERE LARGER THAN LIFE, BUT STILL RELATIVELY BELIEVABLE IN A FANTASTICAL WAY"
GREGG MAYLES

Special thanks to Gregg Mayles, Chris Sutherland, Simon Farmer, and finally, Wil Overton who made all this possible.

Wave Race 64

IT'S ALL ABOUT THE PHYSICS

» NINTENDO 64 » NINTENDO » 1996

Before I played *Wave Race 64* my only experience with jetbikes in videogames was *Jetbike Simulator*. I loved that game by the Oliver twins, even if it was several pounds more expensive than their previous games. *Wave Race 64* was something else entirely, and while there have been many… alright, a few decent stabs at the genre since its release in 1996, nothing has ever come close to the brilliance of Nintendo's original game.

Looking back I think the main reason for this is that the physics really appeared to make an impact on the game, and more importantly, the way you approached the game. Sure, later releases like *Carve* and *Splashdown*, and even Nintendo's own *Wave Race Blue Storm* had far prettier visuals and more impressive physics, but they never really impacted on the player in the same way.

In a normal racing game you simply try and learn the best racing line to be found on each corner, but that never held true with *Wave Race 64*. A simple corner on one track would have to be handled completely differently on a second or third lap and you'd instead find yourself looking for the swells and rises that would help shave precious seconds off your time. Eagle eyes were a necessity in *Wave Race 64* and the impressive and amazingly realistic physics meant that you could soon tell from an incoming wave where you needed to be in order to get the best lap times.

Despite its realistic water physics, *Wave Race 64* was still very much an arcade game, and not a simulator; allowing you to race side by side with inquisitive dolphins and pull off gravity-defying stunts. Of course, showboating was all well and good but you had to be mindful that your crazy stunts wouldn't hamper your all-important lap time. It gave *Wave Race 64* a nice feeling or risk verses reward that it never quite managed to pull off on the GameCube.

All in all, this was a complete gem for Nintendo's 64-bit console, and quite the step up from the top-down shenanigans found in *Jetbike Simulator* on the Amstrad CPC. I still love both games, though *Wave Race 64* just pips *Jetbike Simulator* at the post. ✱

LAP
1

SPEED
97 km/h

MAX POWER

TUROK

As the original Turok: Dinosaur Hunter approaches its twentieth anniversary, Martyn Carroll returns to the Lost Land to reveal why the game was more than just 'Doom with Dinosaurs'

» The automatic shotgun in action, probably the best all-round weapon in the game.

"The game came along at just the right time, at the beginning of the console's life"

T*urok* means different things to different people. For fans of comic books it's a slightly obscure series that's been running intermittently for more than 60 years, where Turok is a Native American man battling prehistoric creatures that have slipped through the cracks of time. For gamers it's a series of popular videogames loosely based on the comic, published between 1997 and 2008, primarily by Acclaim Entertainment. For gaming historians it's the hit series that gave Acclaim a much needed financial boost when it was struggling following a period of expansion and diversification in the mid-Nineties (which included buying up Valiant Comics, the publisher of *Turok*).

» Explosive arrowheads give the bow a whole new level of effectiveness.

Yet for Nintendo fans, and owners of the Nintendo 64 in particular, *Turok* was something much more. The core series of 3D shooters was multiformat, but the first four titles were N64 console exclusives and as such the series is indelibly linked to the Nintendo machine. Crucially, the first game came along at just the right time, at the beginning of the console's life when there was a dearth of software available, decent or otherwise. In Acclaim's native US the game was due to launch alongside the N64 in September 1996, but was delayed until January and then slipped further to March, giving N64 owners an anxious wait for the system's only out-and-out shooter. It released in Europe at the same time, which due to the staggered roll-out of the N64 meant that it arrived just days after the console and its three launch games – the classic *Super Mario 64*, the very good *Pilotwings 64* and the so-so *Star Wars: Shadows of the Empire*.

In both regions, *Turok* was the perfect addition to the line-up. Technically it was very impressive, with the FPS gameplay showcasing the 3D potential of the new system. The depth of view was limited, obscured by the infamous 'fog' that enveloped Turok's world, but it was less jarring than sudden pop-up and it enabled the game to present big open spaces. Not only did *Turok* demonstrate the visual prowess of the N64 (and if you'd just paid a premium to own "The fastest move powerful games console on Earth" then you sure as hell wanted games to ▶

TUROK

» The platforming sections of *Turok* do let it down somewhat. Time a jump wrongly and you'll plummet to your death..

DEVELOPER Q&A

Nigel Cook, creative director at Iguana Entertainment, looks back at the development of the original Turok

How did you get involved with *Turok*?
Iguana Entertainment was bought by Acclaim along with other acquisitions including a small Manhattan comic company called Valiant Comics. The goal was to develop a game based on one of the comic universes that would utilise our proprietary N64 tools and tech. The *Turok* comic introduced a Native American warrior trapped in a lost valley fighting off dinosaurs. We knew instantly this was the one to develop.

We've heard that people were "blown away" by the early demos...
The team knew we had something special during early prototyping. I recall everyone's reactions when they moved through the jungle, toting a bow and arrow, feeling like a hunter, then from out of the mist an axe-wielding warrior darted towards them! Everyone loved it.

Whose idea was the hub system?
Producer David Dienstbier was a creative force on the game. He invented the hub system to have a meta game mechanic that bound all the locations together for a big build-up to the end of the game.

The graphics were praised but not the fogging. Were you aware of this during development?
Fogging was discussed more times during developing than any other content. Due to technical restrictions we had to balance the amount of on-screen geometry versus distance. We felt that fog within a jungle environment could be a misty atmosphere and allow us to focus more graphical detail in the vicinity of the player. In the end it was an off-putting graphical feature for many players. Everyone wished it could have been pushed back more.

Was there anything that disappointed you about the game?
The fog of course and some players had a difficult time in the platform jumping areas. I wish we could have removed some of them and made them easier.

Why was it only released on the N64 (and PC)? Were there plans to release it on other platforms?
Iguana had prior successful titles on Nintendo platforms. The PC version was a conversion and we had no plans to develop on other platforms for a simultaneous release. The team was a minuscule 18 people who focused all of their talents towards N64 console games of that era.

What do you think about *Turok* making a comeback with the recent remastered version?
It's wonderful to see the resurgence and interest in the *Turok* universe. I am very excited to see the path it takes in the future. I think it's time to make dinosaurs extinct again.

"Turok was a violent game with plenty of the red stuff on show"

justify that purchase), but it also proved that third-parties could exploit the power of the new console as ably as Nintendo.

Another crucial element was the game's gore score. It seems laughably tame these days but *Turok* was a violent game with plenty of the red stuff on show. Nintendo was obviously keen to close the door on the SNES era where it regularly censored 'unsuitable' content in certain regions. Acclaim had experienced Nintendo's meddling previously – witness the bloodless version of *Mortal Kombat* for the SNES – but with *Turok* there was no intervention from the platform holder. Accordingly, the game was rated 'Mature' in the US and received a '15' rating in the UK (the blood was removed from the German version but that was down to the authorities and had nothing to do with Nintendo). With bloody games like *Loaded* and *Resident Evil* readily available for the PlayStation and Saturn it was important that the N64 wasn't viewed as the 'kiddie' console, and *Turok* helped greatly in that respect.

» Enemies don't look too great close up, but when animated in game they're pretty effective.

» Swimming is great fun – until you meet amphibious enemies and find that you can only use your knife underwater.

But here was more to the game than snazzy visuals and splashy violence. It wasn't a straight-up corridor shooter either. *Turok* was an action adventure title where the emphasis was on exploration, and that involved running, jumping, climbing and swimming. Hidden within each vast level were keys which unlocked further levels and some keys were easily missed so you really had to search. You faced many deadly foes, yes, and there was an arsenal of over-the-top weapons with which to kill them, but finding the keys was the main objective. And this task was largely entertaining, spoilt only by too many tricky platforming sections where one misplaced jump often led to instant death and a trip back to the last checkpoint (of which there were far too few).

PERFECT POLYGONS

The enemies and creatures that feature on Turok's kill-list

GIANT DRAGONFLY

KILLER PLANT

ALIEN INFANTRY

DEMON

GIANT BEETLE

DEMON LORD

SLUDGE BEAST

ANCIENT WARRIOR

LEAPER

CYBORG

DIMETRODON

RAPTOR

HIGH PRIEST

RAPTOR MECH

POACHER

PURLIN

ATTACK ROBOT

CAMPAIGNER'S SERGEANT

CAMPAIGNER'S SOLDIER

TRICERATOPS

TUROK

PLAYING TIPS

How to become history's greatest Dinosaur Hunter

FOLLOW THE FORCE

■ When you get lost look for the yellow life force triangles as these will show you the direction to head. As an added bonus, scoop up 100 and you'll earn yourself an extra life.

CLIMB THE VINES

■ Pickups and sometimes keys are hidden high up, so look out for climbable walls. Even if you can't see vines, if a wall looks a slightly different colour you may be able to scale it.

CONSERVE AMMO

■ Save your arrows and bullets by using your knife to dispatch dragonflies and beetles. If you're quick you can use the knife to defeat poachers and even small leapers.

GET GAME

■ This is not a conservation exercise. Kill the deer and boars to receive items. Hitting them with the shotgun rewards the biggest bonus.

CHECK THE MAP

■ The automap is one of the game's most useful features. It's great for uncovering secret areas and helpful when performing jumps as you can see where platforms are.

START A FIGHT

■ Enemies of different species will fight each other, saving you effort and ammo. Try luring raptors in the direction of a purlin then slip away quietly when it all kicks off!

CONSTRUCT THE CHRONOSCEPTER

■ Collecting the eight pieces of the Chronoscepter supergun is not compulsory, yet it's almost impossible to beat the final boss (the Campaigner) without it.

CHEATS ALWAYS PROSPER

■ Turok is a tough game, so if you can't beat it, cheat it. The cheat code NTHGTHDGDCRTDTRK it unlocks every weapon and key plus unlimited health and ammo.

Something the game did very well was creating an immersive atmosphere. A nearby roar or screech would see you backing nervously out of area, weapon brandished. And the fogging, which was a technical limitation, served to heighten tension as enemies often emerged from the fog and surprised you. Perhaps it *was* dense jungle mist all along.

On release *Turok* was a critical hit in many countries, receiving strong reviews from many publications. The UK's *Nintendo Magazine* raved over it, calling it "a remarkable achievement" and claiming that it was better than Quake. That was hardly surprising coming from the official Nintendo mag, yet *Turok* and the seminal *Super Mario 64* both received the exact same score in the March 1997 issue – 95%. "At the moment this is the other main reason, aside from *Mario*, to get an N64," the review concluded. *C&VG* also drew favourable comparisons to the *Mario* game in its 5/5 review, calling *Turok* "a completely engrossing and challenging 3D action game. You've finally got a second reason to buy that Nintendo 64".

» Yeah *Tomb Raider* also had a T-Rex, but did that one spit fire and shoot lasers from its head?

» You can't miss the first level key. Later ones are not so easily found.

Whether *Turok* was a system seller is difficult to say, but the game itself certainly sold well, shifting a reported 1.5 million copies. It may have sold even more had Acclaim not blatantly tried to exploit the N64's scant software line-up by ramping up game's price – its RRP was a hefty £70 in the UK, which was £10 more than *Super Mario 64* and £15 more than most other third-party releases. It soon dropped to £40 which was a far more suitable price. Cannily, Acclaim licensed a whole bunch of *Turok* merchandise, with the usual action figures, clothing lines and tie-in novels appearing. The game was also converted to the PC in late 1997 and a 2D Game Boy offshoot (brilliantly subtitled *Battle Of The Bionosaurs*) was also released.

Sequels followed like that flock of Gallimimus in Jurassic Park. *Turok 2* arrived in 1998, introducing a deathmatch mode that was a necessity following the success of Rare's *Goldeneye*. Multiplayer spin-off

TUROK SEQUELS

Turok was not about to slip quietly into the night after his first quest...

TUROK 2: SEEDS OF EVIL

N64 1998

■ The sequel didn't so much reheat the original as serve up an extra-large second helping. There were new weapons with more exaggerated (and gory) effects, larger levels with more variation in design and appearance, and additional enemies with greater intelligence, leading to some entertaining skirmishes. The visuals were also refined, particularly if you plugged in the resolution-boosting Expansion Pak (although this could affect the framerate during hectic moments).

TUROK: RAGE WARS

N64 1999

■ The second game's multiplayer modes were popular enough to convince Acclaim to put out this stop-gap release that ditched the single-player game entirely (well you could battle against bots on your own but there was barely any fun in that). This was designed for competitive play between two-to-four players, and while it definitely improved on the multiplayer offering from *Turok 2*, it wasn't enough to carry a full game. Still, if you had three mates and four pads...

» The final battle with the Campaigner boss. Without the Chronoscepter you'd be history.

Rage Wars followed in 1999 and *Turok 3* the year after. Two further multiformat games were released in 2002 and 2008 (the latter published by Disney Interactive following Acclaim's eventual collapse in 2004). Each sequel strayed further and further from the primitive storyline and setting of the original, and it's probably fair to say that they lost the sense of wonder and fun somewhere along the way.

In 2015 the original game was remastered and released for PC and Mac by Night Dive Studios. Playing the N64 game using an emulator is a claw-handed nightmare so if you don't have access to the original, this update is the ideal way to revisit *Turok* and discover why the game means so much to those early N64 adopters.

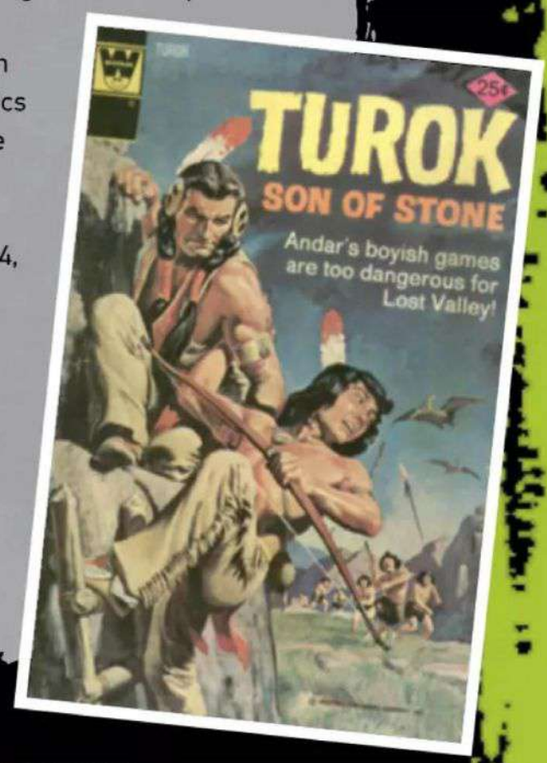
» Compare the UK version with the censored German release, which replaced humans with robots and removed all traces of blood.

TUROK: SON OF STONE

Flicking through the pages of Turok's comic book past

Turok is nowhere near as well-known as comic book creations such as Spider-Man, Iron Man and The Incredible Hulk, but he actually predates them and many of their ilk, having made his first appearance in 1954. The original comics were created by Western Publishing and titled *Turok: Son Of Stone*. They follow Native American Turok and his brother Andar as they try and escape from the "Lost Valley", a timeless zone where dinosaurs roam.

The original series ended in 1982 but was resurrected ten years later by Valiant Comics who introduced the *Dinosaur Hunter* title which the videogame would later adopt. The new series also changed the premise so that Turok battles both ancient creatures and futuristic foes including aliens and 'intelligent' mechanised dinos. Following Acclaim's acquisition of Valiant in 1994 and the release of the N64 game in 1997, a new series of comics arrived to capitalise on the character's videogame exploits. Despite the collapse of Acclaim in 2004, Turok has lived on as a comic book character, appearing in a number of new serials. His most recent appearance was in *Gold Key Alliance*, a five-issue series published by Dynamite Entertainment in 2016.



TUROK 3: SHADOWS OF OBLIVION

N64 2000

■ The third game proper arrived late in the N64's life and was largely overlooked, which was a shame as it fixed some of the key issues with the first two games (chiefly the painful save system and the lack of clear objectives). It was also the most eccentric of the three, featuring some truly odd creatures and outlandish bosses. The graphics and animation were further improved, but once again this played havoc with the framerate, draining some of the fun from the game in the process.

TUROK EVOLUTION

GAMECUBE, XBOX, PS2 2002

■ The series returned after a short hiatus but it was now no longer a Nintendo console exclusive, appearing on the GameCube, Xbox and PS2 (plus the PC as usual). Despite the title, the game had one foot stuck in the past, being more or less an update of the popular *Turok 2*. Hyped additions like the flying missions were dashed by poor controls, and the whole game looked pretty ordinary when stacked up against other console FPS titles like *Halo* and *Timesplitters 2*.

TUROK

XBOX 360, PS3, PC 2008

■ The sixth (and to date final) game in the series was the first not to be developed by Acclaim. The title suggested a reboot but this was very much a continuation of the series, and some of the problems that plagued the earlier games (poor checkpointing and vague signposting) returned with a vengeance. It did feature some enjoyable stealth elements (something the series had only dabbled with previously) but overall that was another average and indistinct FPS.

CLASSIC MOMENTS

Lylat Wars

» **PLATFORM:** NINTENDO 64 » **DEVELOPER:** NINTENDO » **RELEASED:** 1997

The most iconic part of *Lylat Wars* outside of its main cast of anthropomorphic sci-fi heroes is surely the bizarre, but brilliant idea that the last boss is a floating gorilla head.

The final scrap with Andross, which is certainly a step up in difficulty from any of the preceding levels, varies depending on which of the game's two branching narrative routes you take – the more difficult one ends with Andross transforming into his true form, a disgusting giant brain, and climaxes with you performing a daring *Return Of The Jedi*-style escape from danger.

But all routes end with an assault on this giant gorilla head, which is animated so expressively, and the scale of which is so impressive, even relative to the other gigantic boss battles earlier in *Lylat Wars*. It was a brilliantly surprising reward for your efforts that tonally matched the climax of *Star Fox* on SNES but made the most of the possibilities granted by the N64's 3D technology.

BIO

Known as *Star Fox 64* everywhere else but Europe – apparently due to a possible copyright dispute over the name 'StarVox' in Germany – according to developer Dylan Cuthbert, this sequel to *Star Fox* on SNES had a weird journey to completion. You probably know the story of *Star Fox 2*, the scrapped SNES sequel, which debuted the multi-route structure that eventually surfaced in *Lylat Wars* – some of the content made it into this N64 title, but the majority of *Star Fox 64* was original. Being skilful allowed the player to unlock new paths through the story; an undoubtedly forward-thinking idea in an energetic arcade shooter.

MORE CLASSIC LYLAT WARS MOMENTS

Another path

Lylat Wars leaves it to you to discover the different routes through levels offered by the story, and the first time that happens to you is pretty damn exciting – circumnavigating a few tight cliffs leads Falco to take you through a waterfall and fight a completely different end boss. This is when *Lylat Wars* starts to branch, letting players gradually peel off each strand of its vast galaxy.

Starwolf showdown

Players face Starwolf no matter which path they take. It's in this encounter, however, on the Death Star-like surface space station environment of Bolse, that *Lylat Wars* feels the most like a *Star Wars* movie. With surface cannons sending laser fire everywhere and swarms of enemy fighters, it's essentially structured like the Death Star battle: take out your rivals, blow the core and we'll go home.

Ground assault

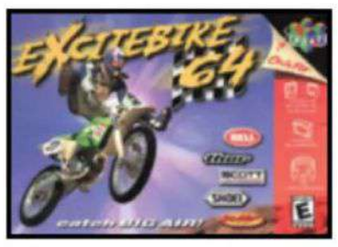
A pleasing departure from Arwing-related combat is the opportunity to drive a landmaster during the Macbeth and Titania levels, putting you on ground level for some variety in combat dynamics as this moving armoured train throws boulders at you. Of course, Peppy and company still fly by Arwing, being the cowards they are (and it would be complicated to program ground AI for all four characters).

Solar

Level design is amazing in *Lylat Wars* – it's easily one of the most enjoyable space shooters outside of LucasArts' back-catalogue, with each level using the mechanics in a different way. In Solar, that's taken further by the fact your Arwing is constantly running down in health as you progress through this hot planet, meaning that you have to keep killing enemies or destroying rocks to survive.

EXCITEBIKE 64

The Nintendo 64 saw many of the Japanese giant's classic games revisited, and Excitebike was no exception. Released towards the end of the its commercial life, it proved the console still had plenty to give. Graeme Mason talked to some of the team behind Excitebike 64



IN THE KNOW

» **PUBLISHER:** Nintendo
» **DEVELOPER:** Left Field Productions
» **RELEASED:** 2000
» **PLATFORM:** Nintendo 64
» **GENRE:** Racing

By 2000, the Nintendo 64 looked like a console from a different era. The PlayStation had debuted five years earlier, and Sega had released the Dreamcast just a year earlier. The European and American release of the PlayStation 2 was just around the corner, and all these systems embraced the new CD storage medium in contrast to Nintendo's steadfast belief in the longevity of the cartridge. Yet the Nintendo 64 was far from short of classic games, many of them updates of famous Nintendo IP such as *Zelda* and *Mario*. The original *Excitebike*, first released on the Famicom in 1984, was a popular title, yet one that strangely failed to make an appearance on its follow-up, the Super Famicom (SNES). By the end of the century, it didn't look like it was going to make it onto the Nintendo 64 either.

Left Field Productions had been co-started by British veteran coder Mike Lamb in 1994. Having had a successful career in the UK for Ocean Software, Mike moved to American in 1991. "I'd always wanted to go to America after having seen *The Rockford Files* as a kid," he explains with a grin. "Then, when Malibu games advertised for a coder, I applied, and got the job." Once installed at the West Coast developer, Mike found himself involved its boxing games, specifically *Evander Holyfield Boxing*. The success of that game persuaded Mike to take a liking to the sport, and a realisation that if he wanted the freedom to work on the projects he really wanted to, he needed to start his own company. Another deciding factor was money. "I'd met Jim Simmons, who wrote the original *John Madden* game for EA Sports. I'd done quite nicely out of my boxing game royalties, but Jim was making a lot more by working for himself, and his games were franchises, where instead of starting from scratch, he just tweaked the AI and graphics every year."

After talking to his artist, Jeff Godfrey, Mike decided to leave Malibu, start his own company, and work on securing a major licence from Sega Sports. "Unfortunately they [Sega Sports] weren't keen on entrusting a big licence sports game to a start-up," says Mike, "so we ended up working on *Slam 'n' Jam Basketball* for Crystal Dynamics." To reflect its sporting origins, Mike named the new company Left Field Productions and began hiring, including fellow Brit and 3D programmer Ben Stragnell.

"We'd just shipped *NBA Courtside* for Nintendo," begins Ben, "and were in discussions regarding what our next title should be. We pitched a few ideas, all of which were at least somehow sports-themed as that had been our speciality to date." One of the ideas that was floated about was a motocross game, thanks to some of Left Field's producers being particularly into the sport. "That idea won out and I was very happy because it was a nice departure from the team-based sports titles that Left Field had focused on to date."

While the team were busy prototyping ideas and working out the game mechanics, the idea of making a true sequel to the NES game arose. Nintendo's producer, Henry Sterchi, takes up the story. "*Excitebike 64* started out as a more traditional motocross game to prove out the core engine, handling and basic play. The handling was physics-driven and realistic, but I wouldn't have called it a technical simulation. We did try some real-time track deformation such as tyre ruts, but it was abandoned because it wasn't that fun and quite a technical drain."

> **"Excitebike 64 started out as a more traditional motocross game"**

When Henry judged the time was right, the game was presented to Nintendo and a true sequel to *Excitebike* proposed. "We'd already discussed and prototyped the thing we wanted around the turbo mechanic and track designs in order for it to be an authentic *Excitebike* experience," continues Henry, "so it was always the hope that they'd go for it and if it didn't work out, it was ready to stand on its own as a more traditional motocross racer."

Fittingly, while Ben and Mike both missed the original *Excitebike* first time around, Henry Sterchi was a big fan of the game. "I lived in New York at the time of the NES release, which was one of the first test markets," he recalls. "I got the little brochure with my NES and must have looked at that single screenshot of *Excitebike* nearly every day until I could save up enough money to get it." Despite loving the game, Henry was to be disappointed by the non-working track editor of the US version. "It was a feature of the Famicom disc version that got pulled; but actually it looked like it worked but just hung there. But overall, *Excitebike* was one of the inspirations that started me on my journey of wanting to make video games myself." Having worked with Left Field on its two *NBA Courtside* games, Henry also shared the love of motocross.

» Mike Lamb

» Ben Stragnell

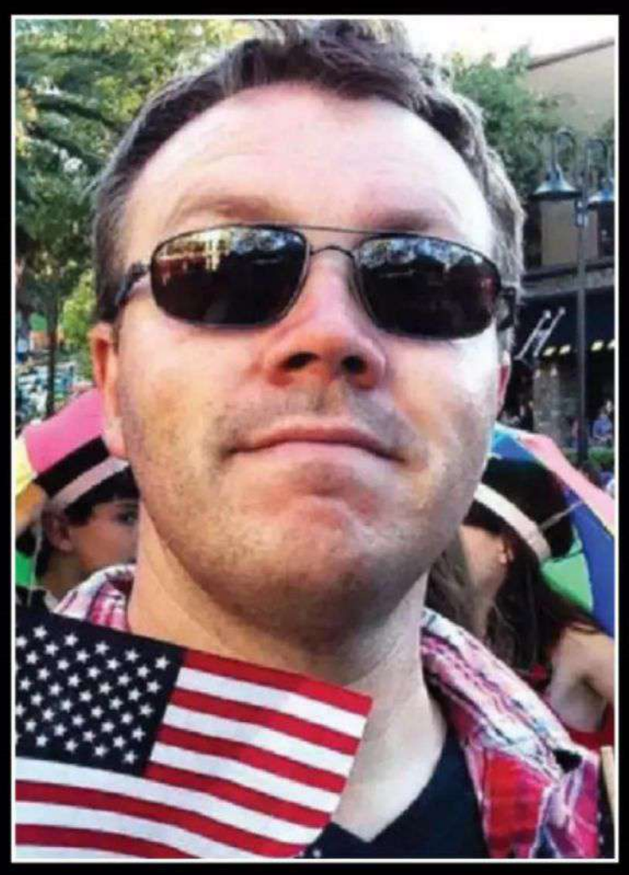
» Henry Sterchi

SOUNDING OUT EXCITEBIKE 64

We talked to the awesome Matt Furniss about his sound design role

"*Excitebike 64* was my first Nintendo 64 game," says Matt. "Although I only actually did two, this and *Cruisin' Exotica*." Matt took over from Mike Lamb's brother Chris, who left the project early on to pursue his career elsewhere. "I'd already worked on a lot of extreme-sports games for 989 Studios," continues Matt, "So I was probably a good fit for the project. The music is a collection of two-channel audio stems, and we recorded the voice-over stuff at my studio in Burbank."

This commentary was by Left Field producer James Higgins, while Matt contributed the announcement in the game's intro. He almost wasn't required, as Left Field initially planned to licence existing music and develop compression tech to squeeze the tunes in the cartridge. The idea was abandoned due to time constraints. "I'm obviously glad they didn't use licenced music. That would have been very un-Nintendo. I was thrilled to be working on a N64 version of Miyamoto's original. That's why I remade the finish race tune – a tip of the hat to the original."



» Thrilling jumps were de rigeur for every track.

"We had a bunch of enthusiasts at Left Field and they all gave us feedback," recalls Mike Lamb, "I had a bike myself from the age of 16 to 25, but they tend to work better on flat ground for me!"

With Nintendo already a stake-holder in Left Field, fully-fledged development of *Excitebike 64* began, and thoughts turned to how to make the game faithful to the original in some ways, yet entirely new and fresh in others. "The key to the original game was controlling the bike in the air to stick the landings and I think we captured that pretty well," explains Mike. "I don't think a truly faithful update would have really been enough on a 64-bit machine and fortunately Nintendo understood this and were on board with making a more simulation-based motocross racing game."

Mike himself coded all the physics and gameplay. "I was a big fan of how games like *Wave Race* and *F-Zero* gave you different vehicles that were roughly equal but different," he continues, "So we sort of followed that model. You had acceleration, top speed handling and stability and the bikes were balanced with different trade-offs. So, for example, a heavy guy had good top speed, but poor acceleration." Ben, meanwhile, wrote the game's 3D engine, a tool chain for the artists and coded the biker animation, while Sam Baker created the game's menus and, inspired by the original game, a track editor.

Sam recalls the organic nature of *Excitebike 64*'s development period, which created the hit game, "We knew from the outset we wanted to make a kick-ass and great-looking racing game that captured all the speed and big air of motocross – and that we wanted to support indoor arenas and a variety of outdoor tracks. But the most important thing was that the bikes handled well, and that was down to Mike [Lamb] and his physics-based model for the bikes. Beyond that, a lot of the development was organic. We had the freedom to try out lots of stuff, and if it was fun, it made it into the game. Hill climb, Excite3D, soccer and desert modes are all examples of that – none of them were in the original design."

As the creator of the game's 3D engine, Ben's main issue was maintaining the game's frame-rate. "I imposed some fairly draconian restrictions on the artists in terms of how the tracks were built," he says, "And it was in order to keep things running quickly. To their credit, the whole art team were able to deliver some amazing work given those limitations."

WHAT THEY SAID...

The California-based software house has not only perfectly recaptured the spirit of the classic for this jaw-dropping N64 adaptation, but upraised a fantastic 3D engine around it, and doused everything with buckets of wonderful new extras too

IGN, May 2000

Despite being nominally producer on the game and Nintendo's conduit to the development team, Henry Sterchi found himself more and more involved with *Excitebike 64*'s progress. "They were great about sending over very frequent builds and providing tools to tweak things or make adjustments remotely," he remembers. "They were a fantastic partner and I helped wherever I could, even in track design and feedback." Henry's reward was a generous inclusion in the design credits of the game. But unlike Left Field's previous game for Nintendo, *Kobe Bryant's NBA Courtside*, *Excitebike 64* carried no official motocross licence or official endorsement from a professional rider.

"There were very few riders that were household names," says Henry, "So it wouldn't have been a single face, but a suite of riders, which would have been very complicated to licence. Had we stayed more on the pro-mode route and not been able to do *Excitebike*, it may have changed, but we felt the gameplay and style should be front and centre. With that, I'm quite proud of the fictional riders we made and it was important to us to include female riders as well, which might not have been possible had we gone 'real'". Nintendo offered no restrictions and, having received approval, the team explained its goals and what they meant to the gameplay. Aside from regular check-ins and specialist reviews, Henry was left free to assist Left Field in *Excitebike 64*'s development period.

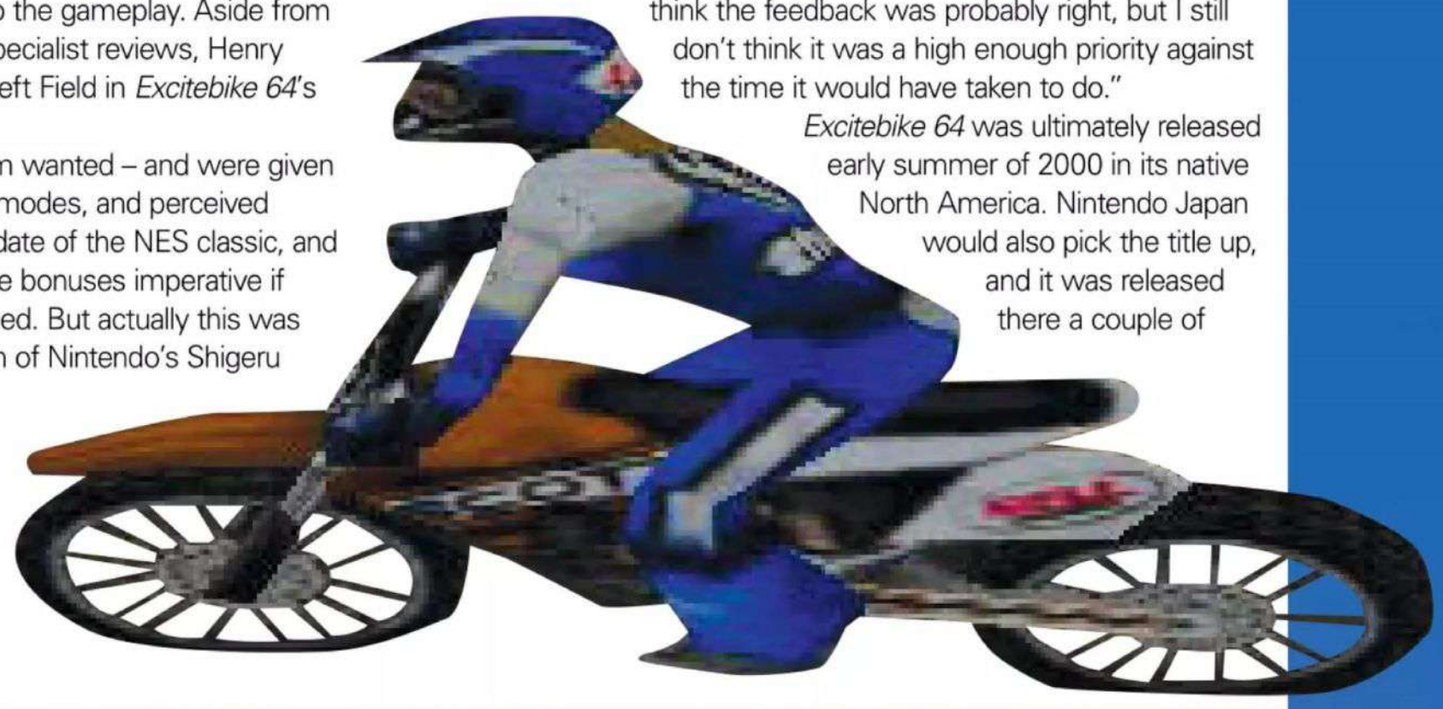
It's apparent the team wanted – and were given – free rein to add extra modes, and perceived added-value to their update of the NES classic, and indeed considered these bonuses imperative if the game was to succeed. But actually this was at odds with the opinion of Nintendo's Shigeru Miyamoto, as Henry Sterchi explains. "He [Miyamoto] gave some great feedback in that we went too wide with the extra modes and should have stayed focused on depth instead. At the end of the day, some of the modes were nice distractions, but he was, of course, right. They didn't improve the main game experience, which was the reason why people bought it." They did bring the added value with mini-games – such as the soccer track, complete with a giant bouncing football, and the infinitely looping desert track – proving popular with critics and fans alike.

Technically, as Ben touched upon, the main battle was not with memory, but frame-rate. "It's very important for racing games," says Mike Lamb, "and we were always trying to push the console to its limits." The result of this was a straight battle between speed, or rather a sense of speed, and keeping everything running smoothly. "We spent a lot of time trying to get the speed up," continues Mike. "We had the bikes going at a simulated 90mph and there was a limit to how far you can push that before the game becomes too difficult to control. We messed around with the camera positioning, but never really cracked it. It was only when I was working on *MTX Mototrax* that I realised we should have widened the field of view, but this would have then had huge implications for the frame-rate, so maybe it was better as it was."

Excitebike 64 took just under two years to develop, longer than originally envisioned. "Getting the higher resolution feature to work took a bit longer due to the frame-rate taking a hit," explains Henry, "plus the split-screen and drone riders, that in hindsight may not have been worth the effort. The scope just kept getting bigger and bigger and the game deserved more time than we thought." Nevertheless, there were still parts that the team felt could have been improved. "If I had to single out anything I think we should have spent more time getting the announcer to sound more fluid," says Ben, "and it would have also been nice to have some crash animations that didn't just involve the rider curling up into a little ball!" Henry agrees on this last point. "We had a good amount of feedback from testing that the crashes should have been more fun, but we didn't really have the time to do any more with it, and we didn't do the old *Excitebike* button mash to run back to your bike, either. At the end of the day, I think the feedback was probably right, but I still don't think it was a high enough priority against the time it would have taken to do."

> **"We were always trying to push the console to its limits"**

Excitebike 64 was ultimately released early summer of 2000 in its native North America. Nintendo Japan would also pick the title up, and it was released there a couple of



WHAT THEY SAID...

All told, *Excitebike 64* is an excellent rebirth of the franchise. The gameplay is arcade-like, but it is also deep and varied in that well-known Nintendo way. The visuals aren't perfect, but they are stunning nonetheless. Most importantly, the game is both fun and addicting, giving oldsters and youngsters alike a chance to revel in the glory that is Excitebike

Gamespot, May 2000

» The forward-thinking addition of female riders was slightly negated by their nicknames.

months later. Finally, over a year after the US release, the game appeared in Europe. "I remember going back to the UK and talking to friends in the UK who said the game still wasn't out," recalls Mike Lamb. "Maybe because Nintendo weren't doing so well in Europe at the time it got delayed, but Nintendo Japan picked it up, so that made up for it." At the time, rumours abounded that Nintendo was struggling to keep up with demand in Europe for some of its popular games. "I'm not sure about that because they always kept things like that close to their chest," says Henry, "But I do remember we had some lengthy issues with getting the PAL versions up to par, which took time. And it could have been NOE wanting to hold the release for strategic reasons." Whatever the motive or cause of the delay, *Excitebike 64* was, in all territories, a late release on the console. Would it have done better had it been released earlier? "It's possible," muses Ben, "But the flip-side of that is that if we'd started development a year or two earlier, we wouldn't have had the opportunity to become as familiar with the hardware. I don't know that we would have been able to make as good a game."

Regardless of its release timing, *Excitebike 64* saw effusive reviews upon release and achieved decent sales ("I think it was over 2 million units world-wide," reveals Mike). Says Nintendo producer Henry, "From my recollection it did quite well and Nintendo thought it was a success. With something like the pedigree of *Excitebike*, expectations were very high, and a hit at Nintendo often meant sky-high multimillions, so it wasn't a number one seller for them as I would have hoped. But it was well-received and moved some good numbers." As to the game itself, most of the team had a positive feeling it would turn out to be an excellent combination of serious motocross simulation and the fun gameplay that Nintendo was renowned for. "I had an inkling it was going to turn out well," smiles Ben, "But it can sometimes be hard to ascertain when you're in the thick of developing a game. I think Mike found a really great balance between realism and fun and the art team in particular found incredibly creative ways to work inside

"I know miyamoto was passionate about the game during development"

the restrictive toolset I gave them. The outdoor tracks in particular were really imaginative."

For Henry Sterchi, working on *Excitebike 64* even persuaded him to go for a change in career. "Doing some design work on this and *Shadows Of The Empire* became the catalyst for me making a career jump from production to design," he reveals. "I loved the nuts and bolts of making a game as a producer, but adding the fun, labouring over the tiniest details in atmosphere, controls and feel, making sure the experience was all it could be, that's what I fell in love with."

Left Field's team for *Excitebike 64* was small, even for the period, and extremely close-knit. There were numerous issues and late nights during development as there often are, but the experience was generally a positive one according to the team. "It's definitely one of the high points of my career," says Ben, who moved on to pastures new shortly after the US release of the game. "And we did keep teams pretty small at Left Field – Sam, Mike and myself were the only engineers on the project. Sometimes I do get a little nostalgic for those days!" For Mike Lamb himself, the game was a further endorsement that he had made the right decision in striking out for himself. "We had a good team. Henry was really good at coming up with concrete ideas that could improve the game. Ben was really good at implementing them and we were all on the same wavelength in terms of doing a simulation-based racing game – *Waverace* on a bike. Everyone worked hard, and it came out well. It was my favourite game we did at Left Field."

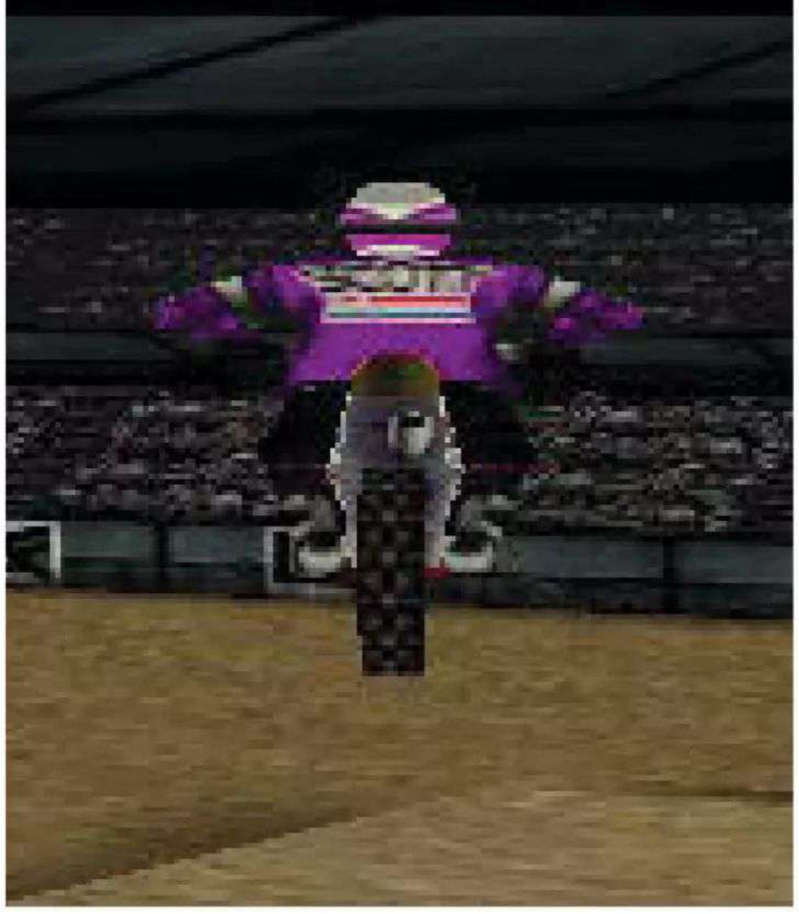
> A Gaming Evolution

Excitebike> Excitebike 64 > MXGP

The 2D *Excitebike* set the franchise going with its unique take on motocross racing. *Excitebike 64* kept the momentum going in 3D.

Released last year, *MXGP* featured real teams and riders in the official licence, marking the advance of the genre.

» The stunt arena is a good place to practise your skills.



EXTRAS! EXTRAS!

Designer and coder Ben Stragnell on some of the added value Left Field put into Excitebike 64

"I thought it might be fun to try and include the original game. It wasn't actually a port – I spent a couple of weekends writing enough of a NES emulator to run the original *Excitebike*. The game also had a track designer save/load feature that was designed for the Japanese Famicom Data Recorder. I was able to put some hooks into the code and enable actual save/loading tracks to the Nintendo 64 cart. I also came up with the idea of the desert track. I'd just seen *Motocross Madness* on the PC and was really impressed that you could see for miles, so thought it might be interesting to get a level-of-detail terrain engine on the N64. The terrain generation was easy enough – it's just some simple fractals. The hard part was stitching together the various levels of details without seams. I don't think I got it completely right. The track editor for *Excitebike 64* was something we wanted from day one. It was pretty much entirely written by Sam Baker, who did a great job with it."

» The view distance could be changed to give a bigger picture.

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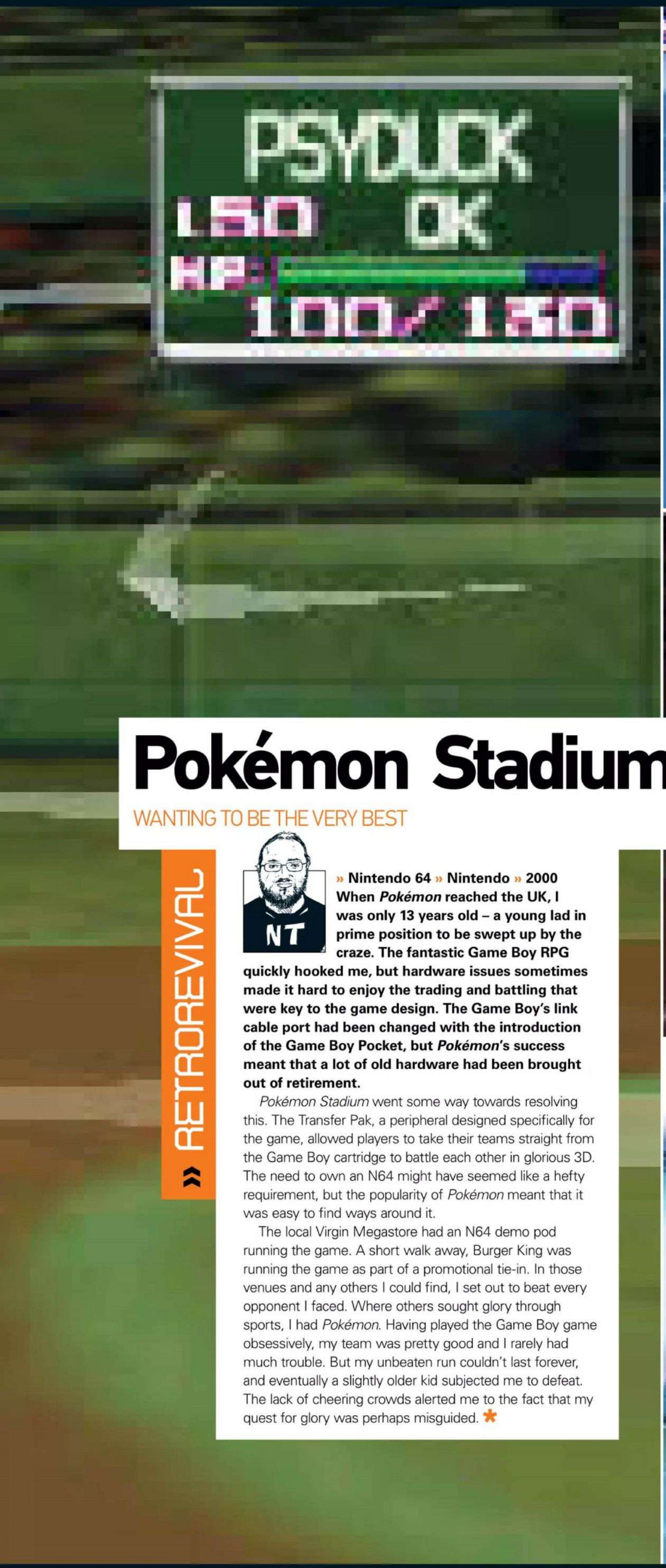
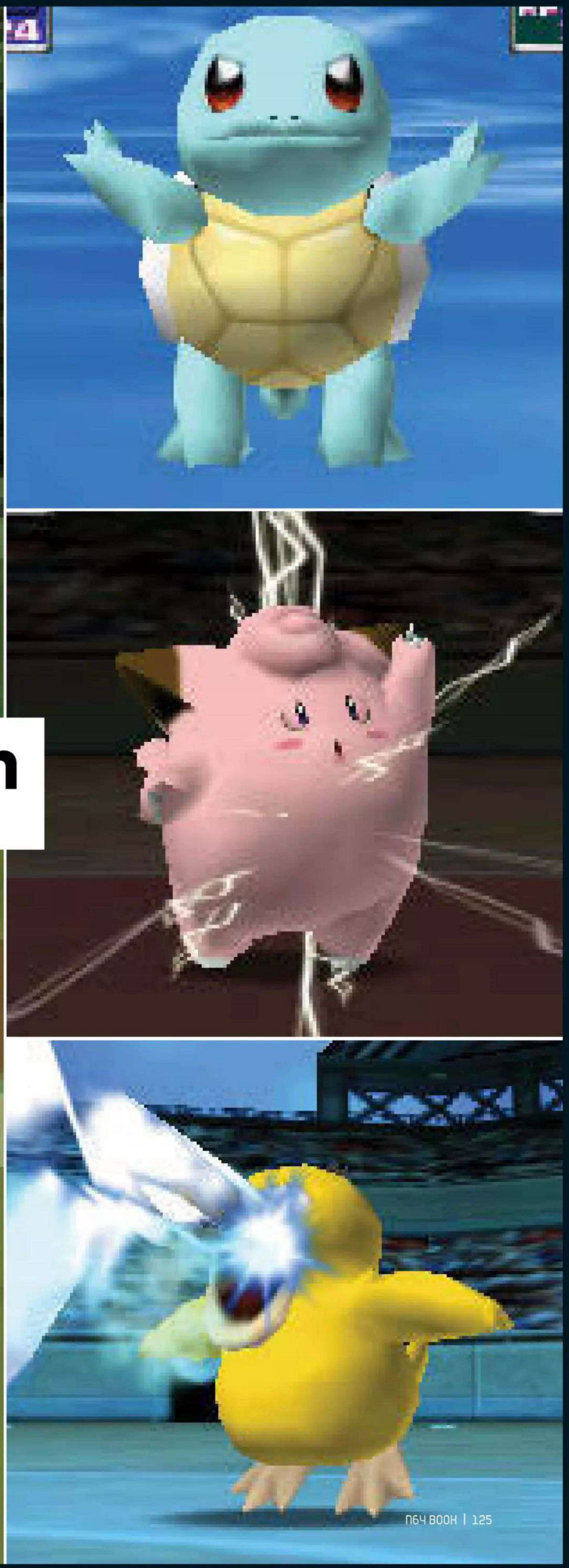




Pokémon Stadium

WANTING TO BE THE VERY BEST

» Nintendo 64 » Nintendo » 2000

When *Pokémon* reached the UK, I was only 13 years old – a young lad in prime position to be swept up by the craze. The fantastic Game Boy RPG quickly hooked me, but hardware issues sometimes made it hard to enjoy the trading and battling that were key to the game design. The Game Boy's link cable port had been changed with the introduction of the Game Boy Pocket, but *Pokémon*'s success meant that a lot of old hardware had been brought out of retirement.

Pokémon Stadium went some way towards resolving this. The Transfer Pak, a peripheral designed specifically for the game, allowed players to take their teams straight from the Game Boy cartridge to battle each other in glorious 3D. The need to own an N64 might have seemed like a hefty requirement, but the popularity of *Pokémon* meant that it was easy to find ways around it.

The local Virgin Megastore had an N64 demo pod running the game. A short walk away, Burger King was running the game as part of a promotional tie-in. In those venues and any others I could find, I set out to beat every opponent I faced. Where others sought glory through sports, I had *Pokémon*. Having played the Game Boy game obsessively, my team was pretty good and I rarely had much trouble. But my unbeaten run couldn't last forever, and eventually a slightly older kid subjected me to defeat. The lack of cheering crowds alerted me to the fact that my quest for glory was perhaps misguided. ✱

SHADOW MAN

In 1994, Acclaim Entertainment purchased popular comic publisher Valiant. First came Turok – then this gothic tale of Michael LeRoi, a voodoo warrior charged with protecting the world of the living – from the world of the dead…

IN THE KNOW

» **PUBLISHER:** Acclaim Entertainment Inc.

» **DEVELOPER:** Acclaim Studios Teeside

» **RELEASED:** 2000

» **PLATFORM:** Nintendo 64

» **GENRE:** Adventure

The early to mid-Nineties were a successful period for Glen Cove's Acclaim Entertainment. *Mortal Kombat* was raking in the dollars, and with the millions invested by cable company Tele-Communications Inc burning a hole in its pocket, Acclaim was looking for companies to acquire. Valiant Entertainment was founded in 1989, partly by famous Marvel alumni Jim Shooter and Bob Layton. The comics industry was fast approaching its peak, which was reached around 4-5 years later when Valiant's venture-capital investor, Triumph, sold Valiant to Acclaim. As Acclaim CEO, Greg Fischbach, told **Retro Gamer**, "We paid 75 million dollars [for Valiant] and lost a shitload of money. It was a banker. They were the third biggest comics company, and we were looking for something else to invest in." Acclaim took over publication of Valiant's line of comics, and naturally eyed up several titles as potential videogames. "But we bought into the comic book business right at the top of the market," continues Greg, "and then all of a sudden it starts to fall apart. And we rode it all the way down."

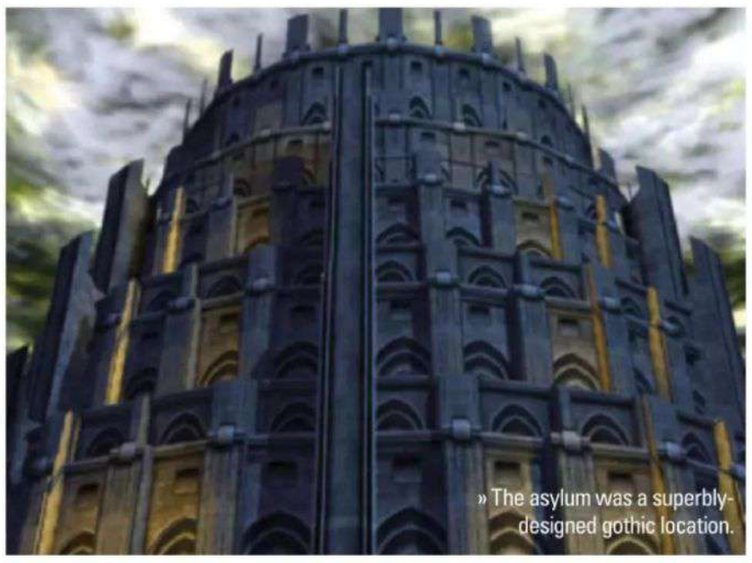
Acclaim's first cross-media product was an obvious choice in *Turok: Dinosaur Hunter*. Dinosaurs were back in vogue thanks to the *Jurassic Park* franchise and *Turok* became a massive hit, particularly on the Nintendo 64. It was developed by Iguana Entertainment, based in Austin, Texas, and in addition to Valiant, Acclaim was busy acquiring more games developers and subsuming them as satellite development studios. In the UK, Optimus Software, founded by Jason and Darren Falcus in 1988, would become part of the American company.

"We were a small team in the north east of England, working on games for a few major publishers such as Codemasters and Gremlin," explains Jason Falcus. "Our first employee, Adrian Ludley, emigrated to the U.S. and ended up working for Iguana Entertainment." When Ludley hooked up his former employers with the CEO of his new company, Optimus Software soon became Iguana UK and subsequently Acclaim Studios Teesside when it purchased Iguana Entertainment. After the success of Turok, Valiant's line of comics were scrutinised for further possible videogame franchises. Continues Jason, "Acclaim sent a load of Valiant comics to our studio and asked us if we'd like to pitch for a game based on any of them. We looked through them all and *Shadow Man* stood out as being perfect for the transition to videogame. We felt it filled the gap in the market for a platform adventure game with a darker, more mature theme, as well as a rich storyline."

» Guy Miller in full zombie makeup for an E3 show.

» *Shadow Man* offered a wide array of interesting demonic enemies to take on throughout the game.

» Some of the Acclaim Teesside staff relax in a local pub around the time of Shadow Man's development.



» The asylum was a superbly-designed gothic location.

> **"We bought into the comic book business right at the top of the market"**
> **Greg Fischbach, Acclaim CEO**

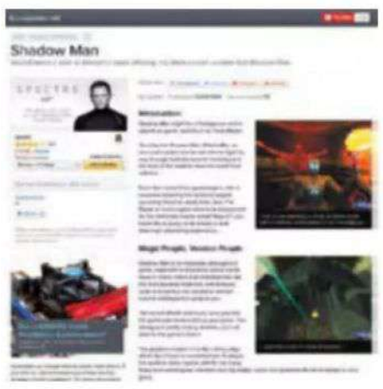
Shadow Man is the story of Michael LeRoi, an undead voodoo warrior caught between two worlds: our world, the Liveside, and the Deadside, a grim and dangerous place where all souls eventually locate. The game begins in 1888 as legendary serial killer Jack the Ripper prepares to take his own life, disappointed the unearthly powers his killing spree was meant to unlock have not materialised. Enter Legion, a powerful being seeking to recruit five serial killers, each harbouring a dark soul that he plans to use to create an immortal army. Legion's target: Liveside.

Acclaim Teesside assembled a team of approximately 20 people to work on *Shadow Man*. A budget and timescale were set although, as was fast becoming common, these evolved over time as the scope of the game was extended. Development began in 1997. Creative director Guy Miller and senior designer Simon Phipps began storyboarding their ideas on how the game would work; graphic artists such as Trevor Storey and Nick Patrick began digitizing this vision, and a group of programmers including Paul Taylor and Jonathan Ackerley set about organising the nuts and bolts beneath the hood. Ex-Ocean audio expert Tim Haywood was another vital cog in the creation of *Shadow Man*'s intricate machine.

On his personal website, Simon Phipps details a slightly different account of how the *Shadow Man* project started.

» The game created a fantastic mix of otherworldly imagery against the backdrop of familiar locations.

WHAT THEY SAID...



The game is massive, very atmospheric, and strangely addictive. It should keep you busy for a week or two at least, and if you've got the patience, it's well worth a dabble

Eurogamer, 1999, PC Version

"We were asked by Acclaim's head office in New York to come up with a 3D horror adventure... along the lines of *Resident Evil*, but in full 3D." A small team within Acclaim Teesside created a proposal that focused on Thomas Deacon, an ex-NYPD policeman who had assumed a brand new career as a demon hunter. Simon also recalls the material Teesside was sent when its proposal was not taken up. "The comics were *Ninjak*, *Magnus Robot Fighter*, *Bloodshot*, *Trinity Angels* and *Shadow Man*, penned by Garth Ennis and illustrated by Ashley Wood...[*Shadow Man*] had been running for about five issues, so it was very easy for us to slot into the timeline and expand the world of Deadside. The premise we worked under was, simply, that if there is no Heaven or Hell and everyone who dies goes to Deadside, then what happens when the really bad people get organised and decide they want to come back?"

> **"It was an opportunity for us to show we could create a new game IP, and make our mark as a creative force"**
>
> **Acclaim Teesside's Jason Falcus**

Studio head and development director Jason Falcus kept a close on eye on all the different projects within Acclaim Teesside. "But *Shadow Man* was very close to my heart," he says, "as it was an opportunity for us to show we could create a new game IP, and make our mark as a creative force. It was an excellent storyline – it took the main characters from the comic and added in a fantastic mix of original characters and some really imaginative locations between the two worlds," says Jason. "Jack the Ripper was a particularly brilliant addition. I don't recall we considered other real-life serial killers, but I'm sure they were heavily inspired!"

However, as coder Paul Taylor explains, another Valiant property was also being developed concurrently. "I joined in 1997 and worked on a game based on another of Valiant's characters, *Bloodshot*," he reveals. "There wasn't much to *Shadow Man* at that stage, but the plan was to use its game engine to give *Bloodshot* a jump start." With the latter project suffering from a lack of direction and a focus on PlayStation to PC development (which caused the eventual dropping of the *Shadow Man* engine and too much time spent rebuilding the tech), it was inevitable that *Bloodshot* would be put on hold as *Shadow Man* grew steadily in size and stature. "I was absorbed into it to help with gameplay programming on the PC version," recalls Paul, "and this

» Trevor Storey relaxes in Acclaim Teesside's rec room.

» A selection of Trevor Storey's *Shadow Man* memorabilia.

typically involved receiving a large sheet of paper with a map of the game level, the level mesh and a bunch of assets from the artists. It was my job to plug these together so that all the tricks and traps worked, doors unlocked when you operated a particular button, cable cars moved when you entered them, cut scenes triggered at the right moment, and so on."

But perhaps Paul's most vital role was the creation of an animation system. "The artists could animate characters just fine, but there was nothing in place for other objects, which had to be done in code. This included doors opening and closing, sliding platforms and, the one I'm most proud of, a big hammer that swings down and strikes a monolith, forming a bridge." The PC version of *Shadow Man* was initially its only planned platform. Having had much success on various consoles, Acclaim was keen to grow its PC market share. When the game expanded to consoles, Acclaim held back the completed lead PC version as the other versions were finalised.

While the driving force of the story remained with Simon and Guy Miller, artists such as Nick Patrick and Trevor Storey also had important roles in shaping the unusual look and design of *Shadow Man*. "I started as lead artist and worked as a level builder, effects and front-end designer," says Trevor, "I thought the story was cracking and [it] really swept us along during development." Nick Patrick, who began as a concept artist on the project, agrees. "Guy and Simon really pushed to keep a story to the game and make it unnerving and unsettling. I worked quite closely with Trevor, and we had to keep a consistent look to the levels. I do remember we played a lot of *Quake* at lunch time back then – I think he must have been losing at one point when his mouse took off and hit me on the back of the head!"

Shadow Man was a complicated development in terms of both design and realisation. With both Simon and Guy having worked at Core Design, comparisons with *Tomb Raider* were inevitable – if a little off the mark, according to Jason. "The success [of *Tomb Raider*] helped us appreciate the potential for such a game," he admits, "but I would say the main inspirations were games such as *Mario 64* and *Zelda*. These titles both utilised expanding 3D worlds, and we loved the way they were based around a central hub, and the world expanded as the player increased their abilities." The team also preferred the dynamic controls of Nintendo's games. Continues Jason, "We wanted to emulate that. I used to get very frustrated by the animation-driven controls of the early *Tomb Raider* games." The central hub created its own set of design issues. While *Shadow Man*'s storyline and plot was relatively simple, the construction of the various levels was not so.

With the game requiring the player to revisit locations from earlier in the game, and be able to explore further thanks to new weapons and abilities, considerable thought and planning was needed to ensure everything operated logically. The designers discovered that the easiest (and fastest) technique was to sketch out each level on paper before passing it on to the world modellers to build, texture and light it. With the comic version of Deadside a black and desolate area, it was left to the imagination of the art department to give this part of the game its detailed and unearthly look. Says Nick Patrick, "I worked quite a bit on the asylum, so those were my favourite parts. The level design was well-planned, but when I look back now, I'm surprised how sparse it feels in places. There are quite a few long corridors with not much in; you wouldn't get away

VALIANTLY GOING FORTH

A short history of Valiant Videogames

TUROK: DINOSAUR HUNTER

A European launch game for the Nintendo 64, Acclaim's version of the loin-clothed beast-slayer was a big hit and paved the way for multiple sequels. Developed by Iguana Entertainment (Acclaim Studios in Austin, Texas), the first-person-shooter had its faults, but benefitted from a dearth of similar titles on the N64. The mixed reviews of 2008's *Turok* on the Xbox 360 and PS3 appear to have ended the franchise for now. Acclaim itself bowed out with *Turok: Evolution* in 2002.

SHADOW MAN: 2ECOND COMING

Despite a botched PlayStation port, the original *Shadow Man* sold decently enough to ensure a sequel was optioned, although given the original's poor effort on the Sony console, it was a little strange that Shadow Man: 2econd Coming should only see release on the PlayStation 2. The plot of the sequel more-or-less mirrors the first game, with armageddon this time threatened by a pair of demons known as Asmodeus and Grigori. The collapse of Acclaim two years later spelled doom for the series, although the comic was rebooted for a short time in 2012.

ARMORINES

Created as an adversary for superhero X-O Manowar, the Armorines were a government-sponsored team of super marine soldiers, and a logical choice for a videogame. Another first-person shooter, the game used the same engine as *Turok 2*, but was received badly, and poor sales ensured there would be no further titles in the series. A shame, as its *Starship Troopers* man vs. the bugs theme could have been a winner had it been better implemented by the developer.

» Many of the real world locations (such as this London Underground station) were even creepier than Deadside.

with that these days!" The asylum is a superbly-designed part of *Shadow Man*, and also used as a hub for some of the game's later levels. "Some of my favourite sections were those in the asylum," agrees Jason, "which I think was down to the weird and wonderful creatures, and also the New York tenement building which was very atmospheric and creepy."

Technically, *Shadow Man* was a huge challenge for the studio. "We had to build all of the 3D tech and tools, including our own engine, called VISTA," continues Jason. "The design was ambitious, requiring large interior and exterior locations with seamless transitions – which at the time was quite unusual. We also wanted a dynamic animation blending system so we could have a more versatile character control system. This allowed *Shadow Man* to run while aiming his two weapons in different directions." Mike LeRoi also possessed uncanny athletic abilities, his slender figure leaping around each level, grasping ledges with one hand and taking out demons with the other. All of the game's controls needed to be fine-tuned so that the complex moves worked correctly.

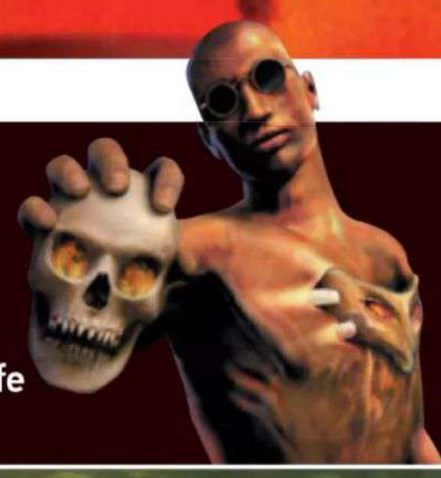
Another, perhaps overlooked, element of Shadow Man was its sound design. Former Ocean Software employee Tim Haywood, having been made redundant from the Manchester company, was recommended by another ex-Ocean worker who now coded for the Tees developer. "They didn't have any audio staff at all, so I had to start from scratch and set up a studio myself," explains Tim. "It was exciting because I had nothing more than a PC, Sound Forge, a simple recording device and one sample CD." Tim improvised to begin with, before approval for additional equipment was granted. Soon the department expanded to include a Kurzweil K2500R (a synthesizer), vocal processor, semi-acoustic guitar and a large sample library.

Tim's first job was providing all of the audio for *Shadow Man*. "I was audio director, composer, sound designer, audio tester, voice casting, voice director, actor, dialogue editor, audio implementer, and trade show evangelist," he grins. "And it really was a blank page. We had the comic books as a reference, and I talked to Guy [Miller] and we picked various film references to draw from. The rest of the audio came from the visual style of the game and how it made me feel."

The prime version of *Shadow Man* [PC] implemented the Miles Sound System; primitive by today's standards, highly effective in 1999. "When you walked through the different areas of a level, you heard ambient sound coming from lots of places, and it blended very nicely for the time,"

SHADOW MAN GETS CUT

Coder Paul Taylor explains how a tragic real-life incident affected Shadow Man



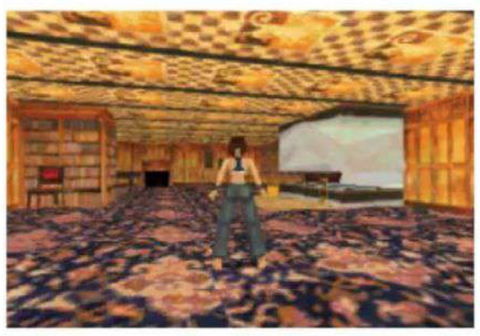
"It came right at the end when we were finishing off the PC version. The infamous Columbine school massacre took place in April 1999, and this led to the sudden and arguably misguided opinion that violent videogames were a key factor. I believe Acclaim CEO Greg Fischbach was called before a senate committee investigating the issue, or something like that. Afterwards, as a result of what was discussed, or nervousness about the public perception of violent videogames, the order came through that *Shadow Man*'s content should be toned down. Gore was cut down across the board, and as quickly as possible. I got an interesting bug caused by this rapid censoring. There was one room where the tiled ceiling bled if you shot it. The collision detection was reporting the bullet was hitting flesh, so I traced it through thinking it must be going wrong and thinking it's hitting something else, possibly outside the room. The trace didn't find anything broken, but it did reveal that there was a body pinned to the ceiling with surgical instruments. In a rush to hide this, they'd simply removed the textures, rendering it invisible. There are rumours of pre-Columbine copies of *Shadow Man* floating around out there, but I've never seen one."

"We literally took the PC version and dropped it straight into the Dreamcast compiler. Of course, it didn't work"

Coder Paul Taylor

> A Gaming Evolution

Tomb Raider > Shadow Man > Mirror's Edge



Tomb Raider encapsulated the running, jumping and shooting of endangered species gameplay.

Mirror's Edge focused totally on acrobatics and movement, and was none the worse for it.

WHAT THEY SAID...

I am simply flabbergasted at how awful it looks and plays. Why did Acclaim try to force this game onto PlayStation while the PC and N64 versions look, play and feel so good?

IGN, 1999, PlayStation version

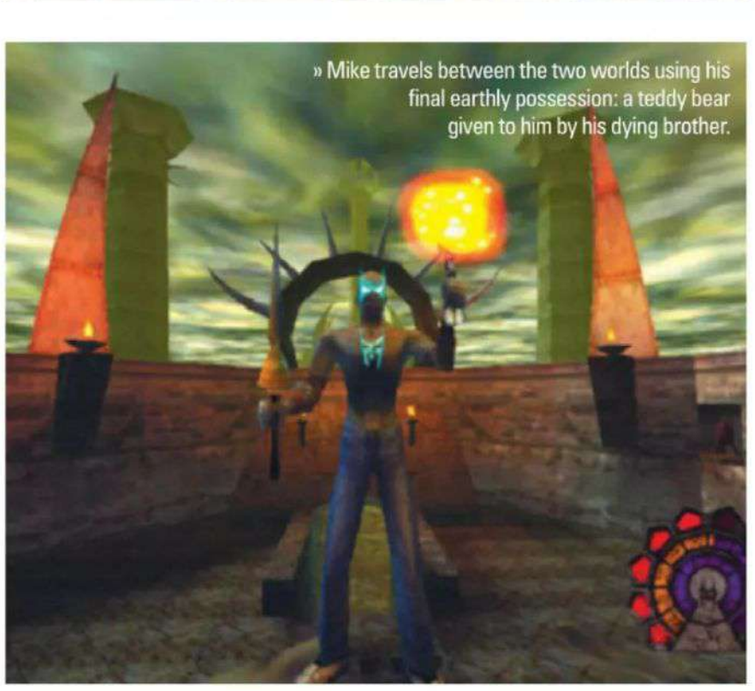
recounts Tim, who despite the smaller storage of the Nintendo 64, used compression technology to squeeze the speech and music into the cartridge. "We just downgraded the quality where we needed to, to make things fit. The PlayStation version suffered the most and had only 90 sound effects from the original 600."

Ah, the PlayStation port. While the PC, N64 and Dreamcast versions of Shadow Man were all well-received, with critics praising the game's atmosphere and playability, things were a little different over on the Sony console and it's generally considered to be the worst version of the game. "Acclaim decided very late in the day that they wanted a PlayStation version," laments Jason. "Basically because it was the biggest platform at the time." Unfortunately, a lack of experience with the console, coupled with extreme time pressure meant the port was vastly inferior to its peers, particularly the excellent N64 version. It was also an unusual move for Acclaim who up to that point had forged a decent reputation based on its support of the Nintendo consoles. "We understood their reasoning – it was a big opportunity to get the game on the biggest platform. But it was a technical nightmare to execute and we weren't very happy with the end result."

Sales were also unimpressive compared to the Nintendo 64 in particular, probably a reflection of the mass of similar arcade adventures on the PlayStation. Mature-themed games were rarer on the N64, and *Shadow Man* neatly occupied that vacant niche. And on the Dreamcast, things were even better, as the powerful Sega console barely broke a sweat emulating the PC version and contained optimised controls due to the lack of a keyboard.

"We literally took the PC version and dropped it straight into the Dreamcast compiler," says programmer Paul Taylor. "Of course, it didn't work…but then we chopped out all the PC-specific code until the compiler stopped complaining. But I was quite proud of it and the team behind it – we managed to pull off a decent conversion in the six months we originally estimated. Just about."

While it is inevitable that development of such a complex game caused minor disagreements, the learning experience that it became for the majority of the Acclaim Teesside



» Mike travels between the two worlds using his final earthly possession: a teddy bear given to him by his dying brother.

team means most of them look back on its lengthy creation period with much fondness. "I loved that time," recalls Trevor, "it was working with a fab bunch, many of whom I'm still friends with today. The game wasn't perfect, but it turned out real nice." Trevor's colleague in the art and design department, Nick Patrick, adds, "I learnt a great deal from *Shadow Man*. It was the first big 3D game that Acclaim Teesside produced as the whole industry was changing with longer development times, bigger teams and larger financial risks. It was tough – when the game went into crunch development, I seem to remember Tim [Haywood] was spotted wandering the corridors one night – he had been sleeping in his office and got up for a comfort break."

In reality, Tim Haywood had been living at Acclaim for some time during the development of *Shadow Man*, but still greatly enjoyed the development experience. "I lived there for about a year and had a room with a bed," he tells us. "There were showers and a kitchen, so I had all that I needed. But it was, and still is the best game development experience I ever had. The way it was made is the way games should be made, with deep immersion within the subject matter and total passion for the process and content." Studio head Jason Falcus admits he learned much too, considering his management role on the game. "I learned a lot about developing large scale, original console games with a large team," he says, "and am proud to have been involved with *Shadow Man*. It was an ambitious project, but I think in the end it was an excellent game, and one that people still talk about today."

» The Nintendo 64 version was excellent, and comparable graphically to the PC game.

RETRO SHAMER

SUPERMAN 64

MOST PEOPLE REMEMBER THE MAN OF STEEL FOR WEARING HIS PANTS OUTSIDE HIS CLOTHES, BEING PETRIFIED OF MINERALS, AND PICKING ON BALD MEN. RETRO GAMERS, ON THE OTHER HAND, REMEMBER SUPERMAN 64, A GAME WIDELY REGARDED AS THE WORST EVER CREATED. SO, IS IT DESERVING OF SUCH WIDESPREAD RIDICULE? STUART HUNT FINDS OUT

» Is it a turd, is it lame? Yes

» *Stargate*, it transpires that this piece of N64 detritus is a essentially a sh*t version of *Stargate*.

IN THE KNOW

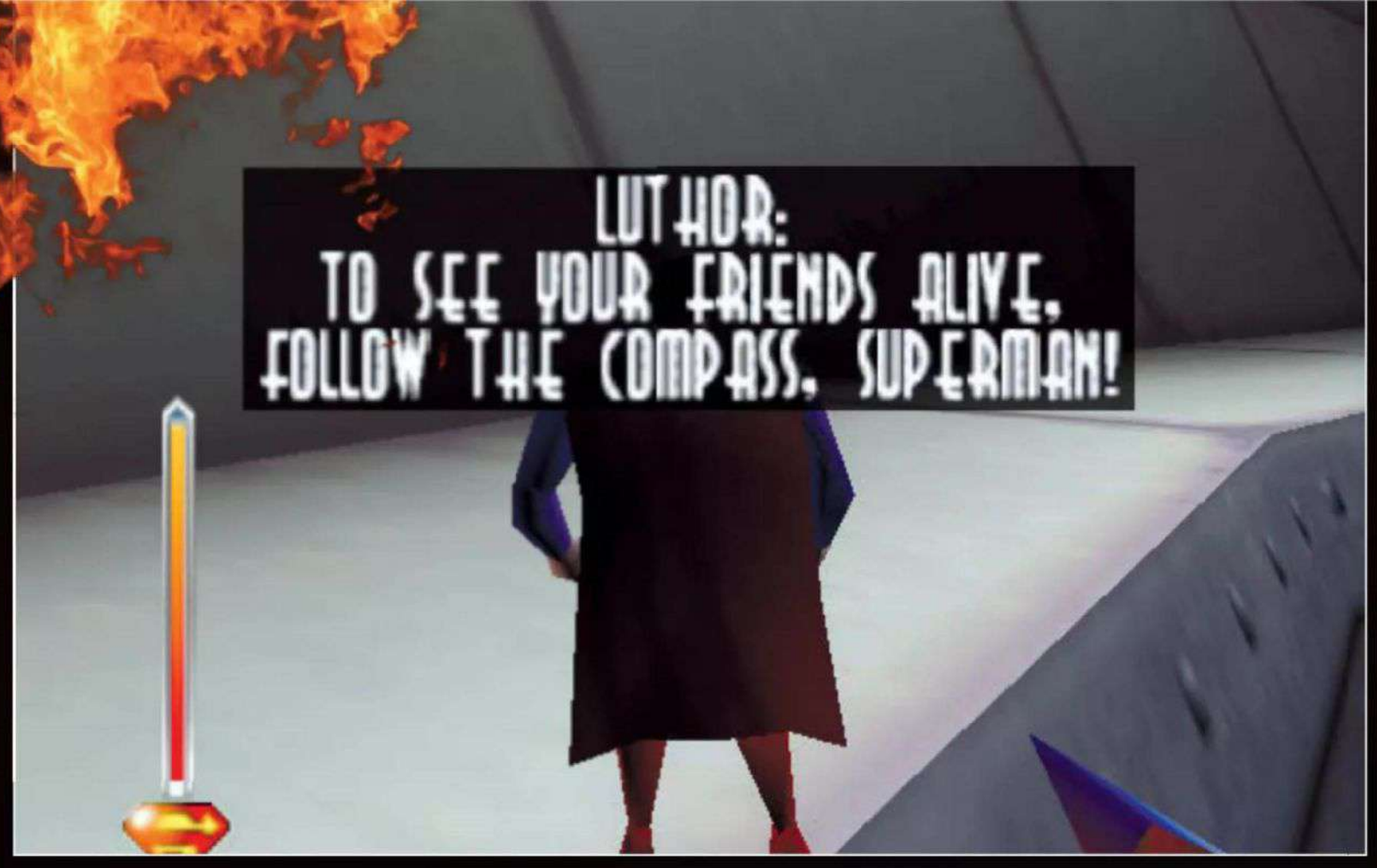
» **PUBLISHER:** TITUS SOFTWARE

» **DEVELOPER:** IN-HOUSE

» **RELEASED:** 1999

» **GENRE:** ARCADE ACTION

» **WHY PLAY THIS WHEN YOU CAN PLAY:** PILOTWINGS



» Play the game on Easy and you don't get any green hula hoops to fly through, instead you have to fly from one section of crap to another with no challenge.

Disbelief is the most prominent emotion, quickly followed by gut-wrenching anger at the fact that someone, somewhere, probably still living among us today, was responsible for inflicting this unfinished tutorial mode of a videogame on the world and expecting us to pay for the privilege.

We've covered some pretty shocking games in Retro Shamer but *Superman 64* is by far the worst we've encountered so far. It starts off bad and goes dramatically downhill from there. It seems Titus Studios constructed ten per cent of a sandbox engine, two per cent of an idea about a game that involved a flying sumo wrestler, and then somehow obtained the Superman licence.

As for a creepy, nightmarish, insane virtual world, Titus excelled by constructing a game that looks like it was built by Doozers and project managed by a dead Fraggle. Watch as childish and shallow buildings materialise before your eyes while our Spandex hero darts around the screen with all the 'super heroism' of a fridge full of gorilla dung. Essentially, *Superman 64* is a long drawn-out tutorial mode that plays like a long drawn-out tutorial mode – in fact, we've played long-drawn out tutorial modes that are better than this entire game.

Four levels, that's it, just four levels were all we could endure of this game before we had to pull the plug. Lex Luthor has imprisoned Superman's friends – Lois Lane, Jimmy Olsen, and some jerk we've never heard of called Professor Hamilton – in a weird portal. You get this peculiar cut-scene of Lex standing in front of Superman waffling on about how he's sending the trio into the virtual bland world and how 'you won't save them'. Instead of burning his face off right there, or even threatening to do so unless he gives up his captors, Superman woefully agrees to enter the realm and the awesome banality begins.

Once inside, Superman must travel through a series of hula hoops at Lex's bequest. Yes the almighty Man of Steel, perhaps the strongest being in the entire DC universe is reduced to conducting menial tasks for Lex's perverse pleasure, which immediately raises a few questions. Why has Lex gone to so much trouble to organise a superhero version of *Pilotwing*'s? Why does Lex even bother to give Superman a window of opportunity to save his friends? And why doesn't he just pull the plug on the virtual world once Superman is inside, thus trapping his nemesis? Also, why are there flashing beacons on the hoops? There are no low-flying planes in the game. Okay, so Superman's controls are erratic and the game is filled with noxious fogging (Kryptonite gas, apparently), but you can't miss the giant hoops even if you try. And why does Lex refer to them as 'mazes' when they're clearly just a series of hoops in a clearly defined order.

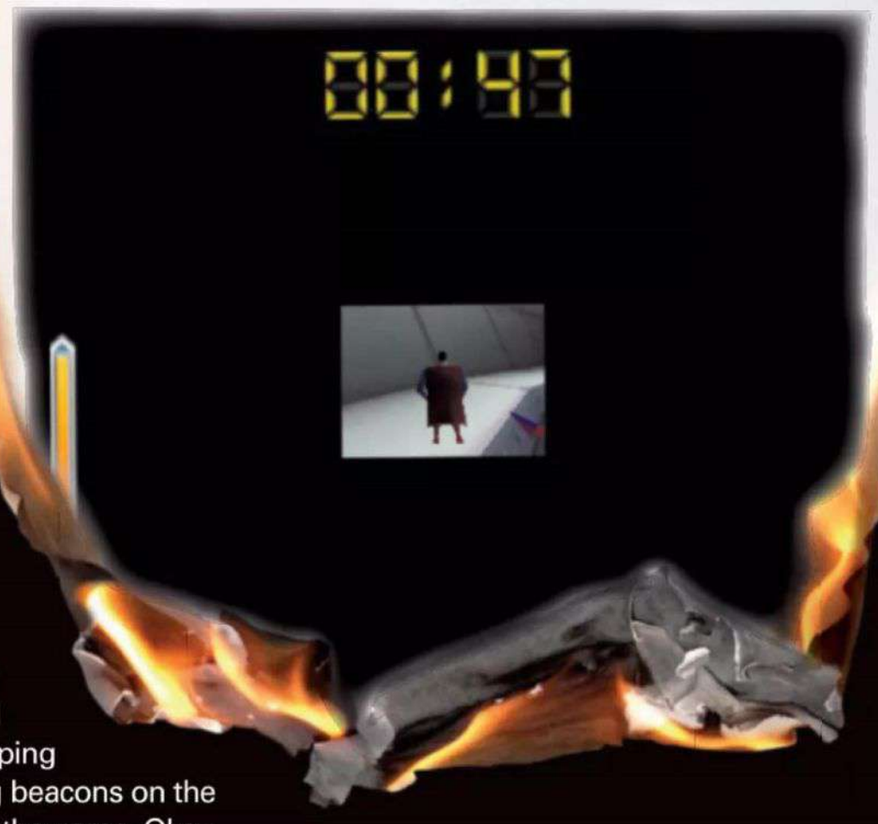
The second level is equally perplexing and involves Superman lifting and throwing two cars before they plough into a woman pushing a pram – an embarrassing feat of Superman's powers. And speaking of Superman's powers, he's supposed to be able to travel faster than a speeding bullet. Not in *Superman 64* – here he can just about travel faster than erosion. And he doesn't start out with his ice breath or laser sight; he acquires them by touching icons… and even then he can only use them when a power meter tells him he can.

The missions are all race-against-the-clock affairs. Which is fine, but the clock used – a digital LCD-style timer you'll commonly see somewhere on a Teasmade – is the most hideous blurred timepiece we've ever seen in a game – it's akin to having one of those numberless wristwatches but without any hands. It proves unnecessarily difficult to read.

After we finished the car-tossing mission, we were tasked with flying through more hoops and then given the job of picking up a police car and plonking it down the bottom of a street before some jerks blow it up with a rocket launcher. At this point we couldn't endure any more. Seeing Superman reduced to Lex's lapdog was just too painful to watch. It was like being goaded to take a photograph of Christopher Reeve getting happy-slapped by a wrestler, and almost as painful as seeing him fight Richard Pryor in *Superman III*.

POINTLESS PART

If you dip into *Superman 64*'s Options screen you'll notice that inside sits a pointless display option. It's a completely ridiculous mode that lets you play the game inside a series of progressively smaller letterboxes. There is no point in opting to let play the game in this manner, it simply makes the world's most appalling game 80 per cent worse.



FIRST IMPRESSIONS

Nothing about this box art is appealing, nothing. The artwork is clearly based on *Superman: The Animated Series,* so on the box we are treated to a picture of Clark making the transformation into Superman drawn in permanent marker and felt tips. No text on the face panel is an interesting notion though – maybe Titus felt showing a picture of a man taking his shirt off was simply all it would take to shift a few Nintendo 64 games.

A WORD FROM THE MAIN CHARACTER

Look, I know exactly what you're going to say. I'm sorry, all right? I just got sick and tired of being so great and powerful and annoyed at Lois for constantly nagging me. The pressure of being a journalist and a superhero simply got the better of me. I thought that jumping through hula hoops would be fun, relaxing, and perhaps even recreational. But it isn't. What if I promise to make it up to you all in the excellent *Mortal Kombat Vs DC Universe* game? Yup, I'll promise not melt everyone's face off within seconds of the match. Honest, I'll hold back, and play up to the cameras a little so the game is playable. I can't say fairer than that now can I?

SUPER SMASH BROS.

Where else do you get to see Luigi take revenge on Mario after years of living in his shadow, or see Captain Falcon fighting for his life against a horde of Yoshis? Luke Albigés wave-dashes back to the party fighter that evolved into a tournament sensation

» It's fun to charge in and bust out your best moves, but it makes more tactical sense to hold back and let others wear themselves out.

SMASH BROS

The core concept of *Smash Bros.* is pretty much as old as time itself. It's the classic power struggle; it's 'my dad is bigger than yours'; it's those playground arguments about who would win in a fight between Batman and Lion-O. But more than that, it's a celebration – proof if proof be needed that Nintendo's family of familiar faces is the best in the business. Today one of the most popular competitive fighting games in the world (player count across *Melee* and the new game at Evo 2016, the world's leading fighting game tourney, fell only just shy of front-runner *Street Fighter V*), it's amazing to return to *Smash*'s humble beginnings and remember just how barebones the experience used to be.

Fire up the Wii U game and you're greeted with an daunting amount of choice. From packed menus that seem to go on forever to a character select screen that only gets even more ridiculous as you add to its vast selection of fighters through general play, you never feel like you've seen everything the game has to offer. That cannot be said of the original game, with its eight core fighters and limited modes, but the comparison is hardly fair – this is a pattern seen consistently throughout the history of the genre. *Street Fighter*'s roster of playable characters has swelled from eight in *Street Fighter II* to 44 in *Ultra Sreet Fighter IV*, *X-Men Vs. Street Fighter* had just 17 to *Marvel Vs Capcom 2*'s 56, *Mortal Kombat* had only seven characters on its inception… in comparison, *Smash*'s cast of 12 fighters (four of whom are locked until certain criteria are met) looks positively healthy.

Better yet, there's very little fat on the roster. With the exception of Luigi (who, as you might expect, ▶

THE SEQUELS ...and the characters that joined the fray

SUPER SMASH BROS. MELEE

GAMECUBE, 2001

■ Widely regarded as the best game in the series and still played competitively to this day, *Melee* more than doubled the character count and went to town with new modes, options, stages and references. Refined controls led to some complex techniques that make high-level play incredible to watch – anyone who considers *Smash* to be a button-mashing party game would do well to check out some pro matches to see the *real Smash* in action.

NEWCOMERS

Bowser [Mario]
Dr. Mario [Mario]
Falco [Star Fox]
Ganondorf [Zelda]
Ice Climbers [Ice Climbers]
Marth [Fire Emblem]
Mewtwo [Pokémon]
Mr. Game And Watch [Game And Watch]
Peach [Mario]
Pichu [Pokémon]
Roy [Fire Emblem]
Sheik [Zelda]
Young Link [Zelda]
Zelda [Zelda]

SUPER SMASH BROS. BRAWL

WII, 2008

■ As well as another massive serving of cool new content, *Brawl* also brought with it *Smash*'s most controversial feature to date. Tripping, where characters had a slight chance of falling over when initiating a dash, added an unnecessary random element into what was proving to be an increasingly technical game, and most competitive circles ended up sticking with *Melee* instead of risking losing high-profile matches after pratfalling.

NEWCOMERS

Diddy Kong [Donkey Kong]
Ike [Fire Emblem]
King Dedede [Kirby]
Lucario [Pokémon]
Lucas [Mother]
Meta Knight [Kirby]
Olimar [Pikmin]
Pit [Kid Icarus]
Pokémon Trainer [Pokémon]
R.O.B. [Nintendo]
Snake [Metal Gear]
Sonic [Sonic]
Toon Link [Zelda]
Wario [Mario]
Wolf [Star Fox]
Zero Suit Samus [Metroid]

SUPER SMASH BROS. FOR 3DS

3DS, 2014

■ This duo of releases is largely similar in terms of content, with the handheld version getting out of the gates slightly ahead of its home console counterpart. Exclusive to the 3DS release, Smash Run mode sees players explore a large level while building their stats, with a random match or challenge taking place at the end.

SUPER SMASH BROS. FOR WII U

WII U, 2014

■ The main event followed a few months after its 3DS stablemate's release, with loads of additional content – the board game-esque Smash Tour mode, a chaotic eight-player mode, the trials of Special Orders and Event modes and the freedom of the stage builder are all exclusive to the home version. There's also DLC characters aplenty, including Ryu and *FFVII*'s Cloud.

NEWCOMERS

Bayonetta [Bayonetta]
Bowser Jr. [Mario]
Cloud [Final Fantasy]
Corrin [Fire Emblem]
Dark Pit [Kid Icarus]
Duck Hunt Duo [Duck Hunt]
Greninja [Pokémon]
Little Mac [Punch-Out!!]
Lucina [Fire Emblem]
Mega Man [Mega Man]
Mii Fighter [Nintendo]
Pac-Man [Pac-Man]
Palutena [Fire Emblem]
Robin [Fire Emblem]
Rosalina & Luma [Mario]
Ryu [Street Fighter]
Shulk [Xenoblade]
Villager [Animal Crossing]
Wii Fit Trainer [Wii Fit]

plays almost exactly like Mario), every character has their own distinct feel and playstyle. At one end of the spectrum sits Donkey Kong, a heavy and hard-hitting option for those who don't like to mess around when it comes to dealing damage, while at the other is Fox, who relies on little-and-often damage as he darts around opponents. There are agile options who can recover well, characters who do better at range than up close and everything in between – for so small a roster, there's a great degree of variety on offer. This extends to the settings as well, with stages based on every major series represented each boasting their own feel and array of options. From the rising hazards of the *Metroid* stage to the angles of Sector Z's moving ships and Arwings, where you choose to fight is just as important as who you choose to fight with. If in doubt, just plump for the Kirby stage – it has the best music and, given that competitive staples Battlefield and Final Destination are only available in single-player here, it's hands-down the most level playing field for any given match-up.

If you even want to play fair, that is – the real joy of *Smash Bros.* is found in its versatility, letting you play the way you choose. By default, items will appear or fall into the stage periodically to spice up the battle, both the nature and frequency of these eventually fully customisable. Like the stages and stars, most of these are nods to classic Nintendo games or power-ups – something taken further still by the Assist Trophies in later games, which call in cameos from even more famous characters – and you can get your hands on everything from Poké Balls that unleash random monsters to the hammer that helped Mario thwart Donkey Kong way back when he still went by Jumpman. Fans of mayhem can crank up the drop rate to ensure non-stop silliness, house rules can be established where certain items are banned and purists can get rid of them entirely, shifting the focus – nay, the genre – from entertaining party game to adept fighter.

Combat itself is novel in that the game doesn't feature traditional health bars. Instead, damage accrued

» With such an amazing cast at Nintendo's disposal, why is the final boss just a giant hand?

» While there's not a great deal more to do than simply brawl, additional modes like this help teach you what each character can do.

by each character is tracked as a percentage at the bottom of the screen, with higher values increasing the effects of additional powerful blows. This feeds directly into the goal of the game, which is to knock opponents off the stage. Any side of the screen will do the trick, with different characters and levels all prioritising different approaches – small stages like Dream Land make blasting rivals off the side the quickest way to go, while characters with strong spiking attacks often do better to stomp their foes off the bottom of the screen. Where possible, that is, as things like the rising acid on the *Metroid* stage deal damage and blasting those who touch it back upwards with considerable force.

The higher your percentage goes, the greater the risk of being sent flying by even the most innocuous of attacks – powerful, well-placed smash attacks can usually finish the deal from around the 50 per cent mark, with 100+ (the maximum is 999, at which point a gentle breeze is enough to finish you off) marking the point at which you need to start being extra careful. Matches are played either for time – where KOs and deaths are tallied up after a fixed period to decide a winner – or for stocks, each fighter having a set number of lives to use before they are eliminated entirely. Coming back into a great fight at 0 per cent after being knocked out is a delight, especially if you'd been panicking about the inevitable

» In team battles, it's important to look out for your buddy. Wayward items or attacks can hurt them, too!

KO previously – a chance to be a little more reckless and aggressive with your attacks, and also to exact revenge on whoever it was that didn't think you deserved to be on the screen any more.

For a game with only two attack buttons, there's a surprising degree of depth to *Smash Bros.* and its high-octane combat. The B button is used for special moves, which performs one of three signature attacks when combined with directional inputs – in the N64 original, only up, down and neutral specials exist, but *Melee* added a fourth direction one for left/right inputs. The title ties into the game's novel use of the analogue stick, where gentle movement of the stick and 'smashing' it quickly in the required direction produce different effects. Do this to move and dash, rather than walk; do it with your standard A button attacks and you'll see them upgraded to powerful Smash attacks, generally the best way to introduce opponents to the gaping off-screen abyss. It feels a little strange at first, unresponsive even, almost like you're not in full control. But just like in any other game that makes good use of analogue control, you come to learn your limits and work on your execution, eventually arriving in a place where everything happens exactly as you want it to, barely having to even think about it. That it isn't only played alongside the likes of *Street Fighter* and *Tekken* at tournaments of the highest level, but pulls in comparable figures in terms of entrants and viewers is telling of ▶

SMASH SIBLINGS

Just some of the many pretenders to Nintendo's throne

DREAMMIX TV WORLD FIGHTERS

GC/PS2, 2003

■ Nintendo's success with *Smash* was in bringing together the great brands that already existed under its umbrella. This brawler pinched bits and pieces from all over the place – from Hudson and Konami games to Takara toy lines – and it felt like a bit of a disparate mess for the most part. Still, it let us pit Bomberman against Optimus Prime, so that's something.

JUMP SUPER STARS

DS, 2005

■ Japanese manga magazine *Weekly Shonen Jump* certainly has the brands to go toe-to-toe with Nintendo's big hitters and this is probably the best *Smash* clone we've seen. Pulling in characters and settings from *DragonBall*, *Yu-Gi-Oh!*, *One Piece*, *Bleach*, *Naruto* and *Death Note* (among loads of others), it's a colourful and hyperactive alternative, although it only came out in Japan.

GUILTY GEAR: DUST STRIKERS

DS, 2006

■ While it made respectable use of the stacked dual screens to offer stages with plenty of vertical space, the low resolution did absolutely nothing for *Guilty Gear*'s usually gorgeous art and fights ended up just being ugly and extremely hard to follow. Perhaps the series should stay in its one-on-one comfort zone – PS2 four-way fighter *Isuka* wasn't a whole lot better.

PLAYSTATION ALL-STARS BATTLE ROYALE

PS3/VITA , 2012

■ It's fair to say that the roster of Sony's *Smash* rival didn't quite have the same clout as that of the series that clearly inspired it – the likes of Drake, Kratos, Cole, Sweet Tooth and Dante meant there were a lot of human characters, and not even Sackboy, PaRappa and Toro could redress the balance. It's actually pretty good, just not on the same level as *Smash*.

MEET THE BROS.

An introduction to all 12 of the original characters

PIKACHU

■ Not suited for beginners due to tricky specials and low defense, Pikachu can still be a menace in the hands of an expert. A nimble glass cannon with excellent recovery capabilities.

SPECIAL MOVES

B – Thunder Jolt
↑ + B – Quick Attack
↓ + B – Thunder

JIGGLYPUFF

■ Incredibly hard to use on account of how floaty and weak she is, although skilled players can make great use of her excellent juggle game. Specials are risky and must be used with restraint. Unlocked after beating her at the end of 1P Game.

SPECIAL MOVES

B – Pound
↑ + B – Sing
↓ + B – Rest

FOX

■ What Fox lacks in power, he makes up in movement – he's agile enough to dance around slower opponents and chip away at them, plus his Blaster can be used to do the same from a safe distance.

SPECIAL MOVES

B – Blaster Shot
↑ + B – Fire Fox
↓ + B – Reflector

DONKEY KONG

■ If you want to hit hard and not worry about speed, DK is your guy. He's heavy, making him harder to knock off the stage, but you'll need skill to land his slow attacks on faster fighters.

SPECIAL MOVES

B – Giant Punch
↑ + B – Spinning Kong
↓ + B – Hand Slap

SAMUS

■ The *Metroid* star is all about controlling the fight from a distance, with amazing mobility options helping her to stay at optimal range while wreaking havoc with projectiles.

SPECIAL MOVES

B – Charge Shot
↑ + B – Screw Attack
↓ + B – Bomb

MARIO

■ As you might expect, Nintendo's mascot is a good all-rounder and a solid choice for newcomers and veterans alike, with decent mobility, a good projectile and potential for some nice combos.

SPECIAL MOVES

B – Fireball
↑ + B – Super Jump Punch
↓ + B – Mario Tornado

LUIGI

■ A clone of Mario with a few minor differences, such as a Fireball that travels straight rather than bouncing. Unlocked by clearing Bonus Practice 1 with all eight starting characters.

SPECIAL MOVES

B – Fireball
↑ + B – Super Jump Punch
↓ + B – Luigi Cyclone

YOSHI

■ Poor little Yoshi doesn't have much going for him – his egg projectiles are pretty bad and with no triple jump, getting caught during a flutter jump is usually a death sentence.

SPECIAL MOVES

B – Egg Lay
↑ + B – Egg Throw
↓ + B – Bomb

KIRBY

■ While he may be light, Kirby's best-in-class mobility means that nobody is better at getting back onto the stage after being sent flying. Stone's invincibility and Copy's versatility help make him one of the best.

SPECIAL MOVES

B – Swallow/Copy
↑ + B – Final Cutter
↓ + B – Stone

LINK

■ His regular attacks have such power and range that they're pretty much the best in the game, but that comes at a cost – his specials can be hard to use and his recovery and aerial abilities are both poor.

SPECIAL MOVES

B – Boomerang
↑ + B – Spin Attack
↓ + B – Bomb

CAPTAIN FALCON

■ *F-Zero*'s representative is one of the best all-round characters – even though he lacks a projectile, his power and mobility make up for this once you get a feel for his delayed attacks. Unlock him by clearing 1P Game in under 20 minutes.

SPECIAL MOVES

B – Falcon Punch
↑ + B – Falcon Grab
↓ + B – Falcon Kick

NESS

■ The *Earthbound* hero is all about projectiles. These can leave him vulnerable in more chaotic fights but in a one-on-one situation, he can be extremely hard to approach, as you'll see if you can clear 1P Game on Normal without continuing.

SPECIAL MOVES

B – PK Fire
↑ + B – PK Thunder
↓ + B – PK Shield

HOW TO SMASH

Top tips for any wannabe bros.

EDGE GUARDING

■ If an opponent is trying to make their way back onto the stage after being knocked off, don't just let them back in for free! Toss projectiles and items their way to make it more difficult for them, and if you can, use a downwards spiking attack and/or drop down and grab the ledge yourself before they reach it, safely rolling back up with Z to prevent them getting back on solid ground.

HALF EMPTY

■ Try to get a feel for how many uses each item has. If you're first to use it, you should aim to throw it away with only a charge or two left – the next owner won't know it's about to become useless and you might just buy yourself a little time as they realise.

LEARN TO LOVE Z

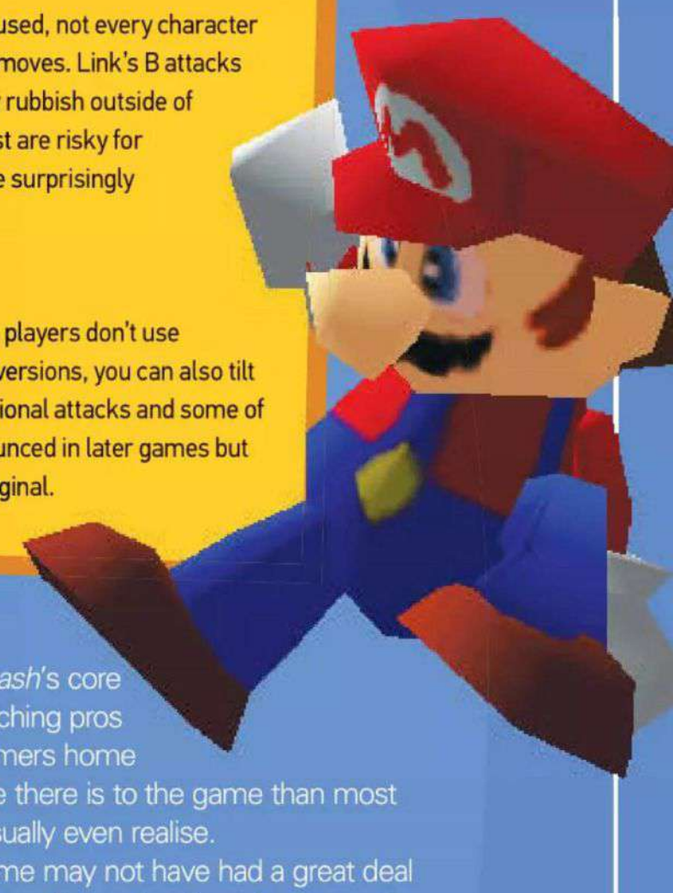
■ Skilled use of the trigger is crucial to good play. While held, you will put up a shield to prevent damage – use this sparingly as it can be depleted quickly. Tap a direction while guarding to roll, which can lead to great openings against slower fighters when timed and spaced well.

NOT THAT SPECIAL

■ Just as Smash attacks shouldn't be abused, not every character should be looking to rely on their special moves. Link's B attacks are all very situational, Yoshi's are largely rubbish outside of the down+B pound and both Sing and Rest are risky for Jigglypuff – look to use throws (which are surprisingly powerful) and regular combos instead.

FULL TILT

■ There's a third type of attack that many players don't use properly – as well as neutral and Smash versions, you can also tilt the stick slightly in directions to use additional attacks and some of them are really good. This is more pronounced in later games but you can still perform tilt attacks in the original.



▶ the quality of *Smash*'s core mechanics, and watching pros compete really hammers home just how much more there is to the game than most people who play casually even realise.

While the first game may not have had a great deal going on in terms of modes and options, however, the same criticism cannot be levelled at any of its sequels. Each piled on additional content – loads more playable characters, additional items, cool new modes and in-game trophies and achievements all come together to make every *Smash* game since the first an incredible proposal in terms of value for money. With so much of the game's charm and appeal coming from its expertly-handled fan service, covering more bases just serves to write beautiful new verses in this love letter to all things Nintendo. What was once a fairly basic fighter is now one packed with potential and options; what was one a fairly low-key novelty now one of the most prominent fighting games on the scene. If ever you need reminding what's so good about Nintendo, just go play *Smash* – the ultimate collection of Nintendo's greatest hits and a way more adept fighting game than many give it credit for. ★

Perfect Dark

THE NAME'S DARK, JOANNA DARK

» RETROREVIVAL

» NINTENDO 64 » RARE » 2000

After Rare's incredible success with the *James Bond* licence, many N64 owners expected a sequel to *GoldenEye* to appear on their beloved games console. Sadly, a sequel never arrived, but in its place was another stunning first-person shooter that not only proved that *GoldenEye* hadn't been a fluke, but it showed just what was possible when you were unshackled from a restrictive licence and given more creative control.

Perfect Dark tells the story of Joanna Dark, a young female spy recruited by the mysterious Carrington Institute to extract a defector from Carrington's competitor, dataDyne. Before long she's caught up in an interplanetary war between two rival factions and… well, we won't spoil it for you, because *Perfect Dark*'s twisting and turning plot is just one of the examples where it improves on Rare's earlier shooter.

Graphically it's superb as well, taking a modified version of the *GoldenEye* engine and pushing it to breaking point. It even manages a hi-res mode via the N64's expansion pack, but this does impact on the visuals, forcing slowdown, particularly when windows get shattered. And damage to windows and other parts of the environment happens regularly, thanks to the insane amount of weaponry that Joanna has access to.

The futuristic setting allowed the team to have all sorts of fun with Joanna's arsenal, and there's a mixture of both real and futuristic weaponry to choose from. Although there are conventional weapons like uzis and submachine guns, *Perfect Dark* also introduced insane offerings like the FarSight XR-20 that enabled Joanna to shoot through walls. She also had an awesome Laptop Gun that could transform into an innocuous looking laptop or be thrown down to become a sentry gun.

By far the biggest difference between the two games was *Perfect Dark*'s multiplayer mode, which delivered all sorts of new mechanics and customisation options, as well as the ability to play against AI-controlled bots for the first time.

Although it set the world alight on its release, time hasn't been kind to the original *Perfect Dark* and it has aged somewhat. Our advice? Pick up the excellent Xbox 360 HD remaster and relive the experience all over again. ✱

Inspired by Mario 64 as much as Mario Kart, Diddy Kong Racing sold millions worldwide. Rory Milne asks Lee Schuneman, Kev Bayliss, John Pegg and Richard Gale about their adventure-racer hybrid

DIDDY KONG RACING

***Diddy Kong Racing* wasn't always called *Diddy Kong Racing*. In fact, Lee Schuneman, the game's producer, wasn't even making a racer until a** member of the development team stuck a mammoth on a moped. "We didn't have much playable," Lee begins, "but Lee Musgrave had come up with a woolly mammoth riding on a moped for some random reason and Chris Stamper decided we should stop doing [an] RTS and make a racer instead."

After switching genres, Lee's project was initially named *Wild Cartoon Kingdom* and then *Adventure Racers* around which time artist Kev Bayliss, coders John Pegg and Richard Gale, and others joined his team. "They were just different titles as the game evolved," explains Lee, "many aspects like being able to roam the central world were all there from the start of the concept, and what really evolved as we progressed were the racing mechanics – like drifting – and challenges." Kev's initial role on *Adventure Racers* was as character artist. "I was involved in the game at an early stage, when the team was relatively small, to help with the direction of the characters," he says. John remembers a badger protagonist and expensive hardware, "I recall *Adventure Racers* featuring Bumper on the title screen. All of our development was done using Silicon Graphics workstations – very much state of the art at the time – [with] internal expansion boards containing N64 development hardware." Richard dates his involvement as post-*Wild Cartoon Kingdom*, "I did work on *Adventure Racers* – development was all command-line based and custom tools."

Lee's expanded team soon gained approval for their project to go into development, renamed *Pro-Am 64* after Rare's NES classic. "Chris Stamper – who was software engineering on the RTS – made the decision, and that was it! We started it in probably August/September 1996. A decision was made that this game was going to be Rare published rather than Nintendo published hence using a Rare IP for the name. *RC Pro-Am* had been successful – having a name that people recognise always helps." Kev adds, "*Adventure Racers* was always going to be a fun, cute racing game, and so taking the 'toy' element from *RC Pro-Am* – they were radio controlled cars – and building upon that seemed to make sense."

» Taj the Genie offers post-race advice and magically changes the player's vehicle on request.

> **"We wanted to push the adventure element of the concept"**
> Kev Bayliss

But rather than cars, *Pro-Am 64*'s team favoured karts, planes and hovercrafts, although not before Kev considered trikes. "We wanted to create a feeling that you were controlling toddlers on trikes. But they just didn't feel right to race in the game, and they didn't look right either," he says.

Given his project was greenlit shortly before *Mario Kart 64*'s release, it would be reasonable for Lee to take inspiration from Nintendo's racer, but the producer's influences lay elsewhere. "We hadn't seen *Mario Kart 64*, my inspirations were *Mario Kart on the* SNES and *Mario 64*," he highlights. Kev expands on *Mario 64*'s influence, "we wanted to push the adventure element of the concept. We wanted to see if we could move the genre into another direction."

Kev also recollects other Rare projects that proved influential in shaping *Pro-Am 64*'s character line-up: "As we were developing other titles at the same time that were about to launch with their own main characters, such as Conker and Banjo, we thought it would be a great idea to bundle them into the game."

A more unlikely inspiration explains *Pro-Am 64* being structured around a central area connected to themed worlds. "It was inspired by theme park design, I've always loved the work of the Disney Imagineers," enthuses Lee.

Asked about the themes chosen for *Pro-Am 64*'s worlds, Lee says their platforming elements gave him license to follow design conventions. "It all comes back to the core concept of this being a platformer world, but with racing, so of course there needed to be fire world, desert world [and] snow world – all the usual suspects!" Kev reveals some ▶

» Bumper eyeballs Diddy Kong on the Jungle Falls track while challenging Banjo for fifth place.

» Targeting Banjo on one of Crescent Island's sharp bends proves too much for Diddy.

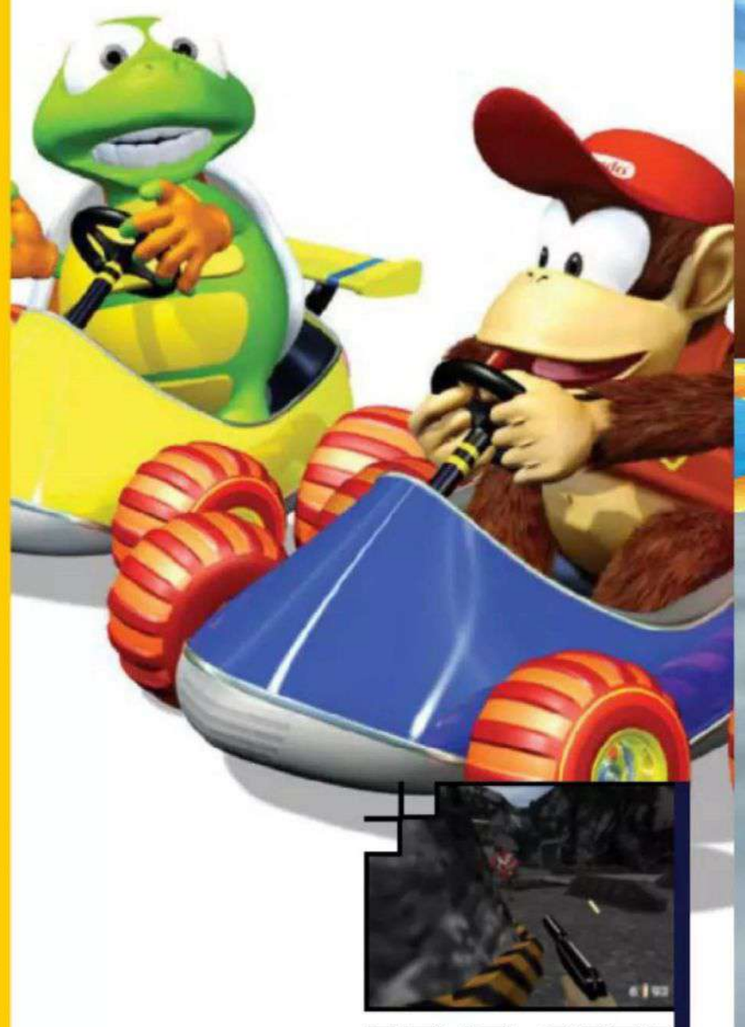
» Competitors must hatch three eggs in a nest to win the Fire Mountain battle stage.

IN THE KNOW

- **» PUBLISHER:** Nintendo
- **» DEVELOPER:** Rare Ltd
- **» RELEASED:** 1997
- **» SYSTEM:** NINTENDO 64
- **» GENRE:** Adventure-racer

DIDDY KONG RACING 101

■ Primarily a racer in gameplay terms, *Diddy Kong Racing* is defined as much by the cutscene storyline and collection-based challenges of its Adventure Mode. Success in these challenges – and winning races – unlocks a plethora of extra content such as additional courses, boss races, battle stages and a bonus world.



DEVELOPER HIGHLIGHTS

GOLDENEYE 007
(PICTURED)
SYSTEM: N64
YEAR: 1997

BANJO-KAZOOIE
SYSTEM: N64
YEAR: 1998

CONKER'S BAD FUR DAY
SYSTEM: N64
YEAR: 2001

» Diddy Kong drifts around one of the tighter bends in Dino Domain's Ancient Lake course.

» Boss Bluey the Walrus invites the player to race in an Adventure Mode cutscene.

▶ plans for the game's desert world. "The dinosaur areas were going to have more in the way of racing beneath stampeding Brontosauruses and across the backs of huge dinosaurs," he highlights. "I don't think we went that far due to the capabilities of the system."

As well as world design, *Pro-Am 64*'s racing aspect required track design, a multi-staged process initiated by Lee. "All the designs were done on paper. I would sketch them out and then one of the artists would build them in polygons," he remembers. "We'd get them into the game engine fast and start driving around. We would go back and fore, a little fine-tuning, and then I would have a tool that enabled me to edit props. The key to each track was that we played every one until [it was] perfect." Kev explains how the tracks were designed to encourage adventuring: "We were very particular about making the tracks nice to look at and almost try to lure the player off the main circuit to explore each environment by trying to ensure that every [aspect] of the tracks looked interesting and involving."

> **"The key to each track was that we played every one until it was perfect"**
> Lee Schuneman

As *Pro-Am 64*'s worlds and tracks evolved so did the AI governing of its cast of competitors, which Lee likens to tabletop racing. "There were four 'lanes' – kind of like Scalectrix – and each lane was a different path around the track, some fast and others slow," he explains. "As you drove around you were 'rubber banded' to the other AI so they always felt close. However, for the highly-skilled we broke the rubber band so the others couldn't catch you up." John notes how each AI racer was made to feel distinct: "Each character had their own performance attributes that could be easily tweaked – for example, top speed, acceleration and rate of turn."

The addition of visually stunning power-ups and weapons helped *Pro-Am 64* realise its platforming aspirations – often in hilarious style. "There were certainly some clichéd *Wacky Races*-style weapons!" grins Kev. John elaborates, "the lead programmer, Rob Harrison, implemented the weapons and power-ups. Paul Mountain wrote the software for some of the associated graphical effects – like the shields and boost cones, [these] were 3D models with code to control their animation."

Pro-Am 64's adventure aspect required Kev to create a series of cutscenes that formed a storyline. "Lead software engineer Rob Harrison worked on a animation editor that was tailored to suit the game," says Kev. "I told Rob what I needed to create sequences, and he created an editor for characters to follow motion paths. I could flag up special effects, sound effects, and move the camera around anywhere. This was then used to create story sequences."

Collection-based challenges and unlockable competitors and tracks helped broaden *Pro-Am 64*'s gameplay and increase its replay value. "We wanted something that would take a while to complete," reasons Kev, "by adding the unlockable content I think we added longevity to the game's life and fun factor." John admits: "I remember the Greenwood Village silver coin challenge being particularly hard – I just couldn't complete it. Tim Stamper's son managed it, and rang me up to ridicule me. He must've only been about ten!"

Unsurprisingly, perfecting a platforming world of racing tracks replete with polygon racers on unfamiliar hardware provided challenges. "For quite a few of us, it was our first game and we had a lot to learn," concedes John. "Even for the team members

» Future Fun Land's Darkmoon Caverns features a pair of high-octane loop the loops.

» A shielded Diddy avoids losing one of four lives in the Darkwater Beach battle stage.

» Timber loses fifth place to Diddy as the cheeky monkey cuts corners in Star City.

» A magnet power-up moves Diddy up a position in Sherbet Island's Pirate Lagoon.

who'd worked at Rare for a while it was quite a transition moving to the N64. In particular, the artists were having to learn how to produce 3D models that were simple enough that they could be rendered and animated by the N64 hardware in real-time."

As the team strived to make *Pro-Am 64* run faster, a clever compromise saw them trade polygons for sprites. "I personally liked the sprite wheels, plane propellers and hovercraft fans," reflects Kev. "This reduced the poly count for each vehicle creating a solid look on a relatively low number of triangles." John offers: "There was definitely a lot of effort that went into making [the game] mostly polygon based. Each vehicle / character combination was modelled at several levels of detail so as they moved further away from the camera they switched to a simpler model."

The spring of 1997 saw Lee demo *Pro-Am 64* to E3 attendees including Shigeru Miyamoto, which led to the racer gaining a new frontman. "My main memory is the reaction to the Tick Tock character for time trial – Miyamoto liked him! I imagine it was at this time that the *Diddy Kong* conversations happened with Nintendo and the Stampers."

A rebranding of *Pro-Am 64* as *Diddy Kong Racing* posed Lee's team few problems while raising their game's profile, but delays on Rare's intended Christmas title, *Banjo Kazooie,* handed them a challenging deadline. "By using Diddy, we had a strong brand, which helped to make the game what it was," Kev says of the rebrand. On festive deadlines, John remembers: "Everyone pulled out all the stops – we worked crazy hours to get it finished, but the team pulled together brilliantly."

Hard graft bolstered by an advertising blitz befitting a Rare Xmas release ensured phenomenal critical and commercial success for *Diddy Kong Racing*. "We had a great game with *Pro-Am 64*, but with the name change and marketing dollars it became a five million seller," Lee beams. "We were proud of the impact in Japan where I believe it went to number one." John comments on the game's critical success: "We'd been developing *DKR* in secret, so there'd been no build up in the press. I remember picking up the issue of a Nintendo magazine where *DKR* was revealed – that was the first article we'd seen, and the response was fantastic."

Asked for final thoughts, Richard succinctly offers: "To this day, I still get a buzz when I meet people that grew up with *DKR*." John ends on a note of pride: "I'm still immensely proud of what we achieved, and it's great that people still play it." Kev has only happy memories: "It was one of most fun games I worked on – it was a fab team to be involved with." Lee's last words on *Diddy Kong Racing* are heartfelt: "None of us knew what we were doing, but we loved every second of making it. It's still fun to play, and I look back with fond memories." ✱

Thanks to Lee, Kev, John and Richard for sharing their stories from the *DKR* barn.

MEMORABLE MASCOT RACERS

More flagship character racing games

MARIO KART 64

■ SYSTEM: N64 ■ YEAR: 1996

In order to run at top speed, *Mario Kart 64* mixes polygon courses with pre-rendered sprite karts. Although geared more towards multiplayer than its predecessor and weighted in favour of the AI competitors, the game's immersive worlds and polished tracks provide a stylish racer that's still enjoyable to play solo.

MEGA MAN BATTLE & CHASE

■ SYSTEM: PlayStation ■ YEAR: 1997

Cleverly adapting the main series' mechanic of claiming your opponent's abilities, *Battle & Chase* rewards victories with the chance to strip defeated racers' vehicles of their parts. Aside from Mega Man, various series regulars are playable, with power-ups being obtained by running over various obstacles.

BOMBERMAN FANTASY RACE

■ SYSTEM: PlayStation ■ YEAR: 1998

Given that *Bomberman* is maze-based, it's unsurprising that *Fantasy Race* ditches the franchise's mechanics in favour of conventional racing gameplay. Bomberman still attacks his foes with bombs, but while racing on Louies and Tirras, which can be traded for other mounts using race winnings.

CRASH TEAM RACING

■ SYSTEM: PlayStation ■ YEAR: 1999

Clearly influenced by *Diddy Kong Racing*, Naughty Dog put its own spin on Rare's established formula to ensure their final *Crash Bandicoot* title stood apart from its more wholesome muse. Imaginative power-ups, kinetic gameplay and sumptuous visuals mark *Crash Team Racing* out as a must-play racer.

KONAMI KRAZY RACERS

■ SYSTEM: GBA ■ YEAR: 2001

A spiritual successor to *Super Mario Kart* of sorts, Konami's game uses a Mode 7-type technique to render its tracks. *Krazy Racers* features not one but a dozen franchise favourites from Konami such as Gray Fox, Vic Viper and Dracula. The title delivers short but sweet courses and well-balanced weapons and power-ups.

The Collector's Guide

Interested in collecting for Nintendo's popular 64-bit console? Mat Allen and RetroCollect's Adam Buchanan are here to offer their expert advice, so you only collect the best games

NINTE

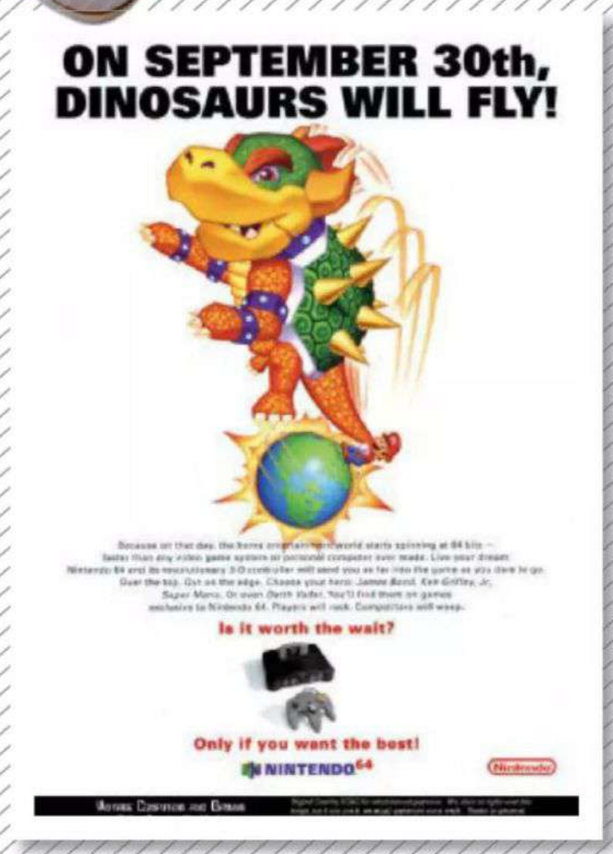
» **Manufacturer:** Nintendo » **Model:** Nintendo 64 » **Launched:** 1996 » **Country of Origin:** Japan

ENDO64

The Collector's Guide

» [Above] There is a huge range of different joypad colours. This all-gold version tied in with the release of Rare's *GoldenEye 007*.

» [Above] RGB scart annoyingly wasn't included on the N64. A mod does exist, but it only works on U.S. and Japanese consoles and a certain French model.



» It may be massively popular now, but *Animal Crossing's* beginnings were very humble. The original N64 game wasn't even released outside of Japan.

WHY IT'S COLLECTABLE

The Nintendo 64 is home to some truly groundbreaking titles such as *Super Mario 64*, a pioneering platformer that opened the doors to many 3D adventures to come, along with *Conker's Bad Fur Day*, a title from Rare that shook the politically correct foundations of gaming as we knew them. But what about the other side to the Nintendo 64? We all know what its best games are, but what about the most collectible, rarest and most desirable games?

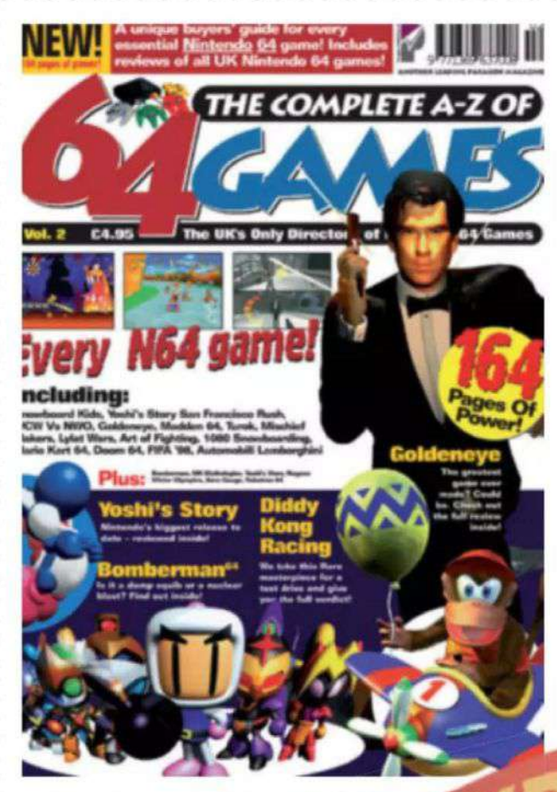
Many undiscovered and rare items can be found within the Nintendo 64 library, which are often the centrepiece of a tussle between collectors. For a system with only 242 games released in PAL regions, it is also a decent starting point for new collectors.

Nintendo opted against using optical media for the N64, which ultimately lost the company its long-standing connection with the *Final Fantasy* series. But in reality it also gained it a fair few fans many years later, fans which Nintendo may have never considered back then. Where collectors are concerned, the majority of CDs haven't survived the transition from new to used as well as they hoped. The poor design of the Sega Saturn cases (which left countless discs to ruin) and the cracked cases of Sony PlayStation games often prohibits collectors from a quick purchase. Games released for the Nintendo 64, however, remain an easy and reliable acquisition due to their robust and reliable shape. With every game sat in a desirable and aesthetic curved cartridge, the form factor of the Nintendo 64 was always more polished than the other consoles on the market at the time.

While these cartridges may have survived a good decade and potentially many more to come, their packaging often remains in a much different state. Just like every other console released under the Nintendo brand before the N64, the games for the system were packaged in gorgeous yet flimsy cardboard boxes. Over the years, the inevitable arrival of accidental and storage damage is often seen with Nintendo boxes. Something you would expect to send collectors away, when in fact it does quite the opposite.

The quest to find Nintendo games in good condition is often a driving factor for many N64 collectors. The fight against a clumsy mail service, poor packaging, sticker residue and more importantly time, makes the hunt just as entertaining as the games themselves. With many collectors now fighting this battle together, a real rise in the value of N64 games has begun to show, as many collectors challenge themselves to find games that could be mistaken for being brand new.

However, it should be noted that it isn't just the packaging and aesthetic value of the Nintendo 64 which drives collectors. The variety and wealth of enjoyable titles on the Nintendo 64 makes it all the more worthwhile collecting them, often more so than other consoles available. Alongside the obvious and desirable games, hard-to-find titles like *Aidyn Chronicles* and *Hercules: The Legendary Journeys* are finding their way into gamers' collections for the very first time. The rarity and obscurity of these previously



» eBay sales might dictate otherwise, but the Pal version of *Paper Mario* isn't actually that hard to find. It's just pricey.

» Certain websites like NTSC-UK.com feature collectors who collect N64 games in the order they were originally released, using old magazines as useful play guides.

» Just a small section of games from Janne Kaitila's impressive N64 and N64DD collection. He's been collecting seriously for around five years and has amassed 394 games.

DID YOU KNOW?

■ A large number of N64 games were only released as rentals in chains like Blockbuster. As a result, they're very desireable due to their rarity and the fact that many of them are often incomplete, as stores would often just rent out cartridges. Rental-only games include *Indiana Jones And The Infernal Machine*, *Razor Freestyle Scooter*, *NFL Blitz Special Edition* and the highly rare (especially in complete condition) *Clayfighter 63 1/3: Sculpter's Cut*.

little-known N64 games comes as a real bonus to new collectors seeking new experiences.

As we all know, Nintendo is no stranger to new iterations of its hardware. With countless versions of the Game Boy available, it came as no surprise when Nintendo began to release variations of the Nintendo 64. Enticing bundles began to arrive such as the *GoldenEye 007* set including a golden control pad and the *Pokémon Stadium* set featuring a *Pokémon* VHS tape and branded console. It goes without saying that these often take centre-stage in a fully-fledged eBay bidding war, but the real collectors often have their eyes set on a more attractive set of consoles. Released late in the life of the Nintendo 64, semi-transparent consoles began to appear on the shelves in a vast range of colours. Out of the bunch, the two-tone clear blue and white console is often found sitting at the top of collectors' want lists, as its exquisite appearance and unforgettable rarity go hand in hand.

Putting official releases aside, even the pirates had a good thing going on the N64. Devices such as *Mr Backup Z64* brought to the N64 the ability to backup cartridges onto Zip disks (or a hard drive with a bit of modification) alongside the *V64 Jr,* which offered a similar approach via a parallel port on a PC. Coming from an 'unofficial' background, and with few places to purchase them from, these backup units sold in very small quantities. Taking into consideration the added functionality these devices offer, along with their elusive nature, they're inevitably the subject of a long line of collectors stepping up to fight for the winning bid on every unit that comes under the hammer.

Last but not least, even the gamers who tend to prefer their games arriving from abroad have more than enough to shout about. On offer lies a rather small yet quaint catalogue of many import-friendly titles constantly changing hands. With heavy-hitting titles *Tsumi To Batsu: Hoshi No Keishousha* (also known as *Sin & Punishment*) and *Bakuretsu Muteki Bangai-O* amongst the pickings, the Japanese auction sites have grown tired of foreign competition for their own treasures.

With all these collecting tips in mind, it should be obvious by now why the Nintendo 64 is so highly regarded. However, this reputation goes much further than the packaging and desire of each title, right down to the sheer quality of games created by Nintendo for its 64-bit system. Titles such as *The Legend of Zelda: Ocarina Of Time* and *Paper Mario* to this day hold many top spots on lists of the greatest games of all time, often accompanied by the likes of *GoldenEye 007*, *Super Smash Bros.* and *Mario Kart 64*. With such a strong selection on offer, the already rising value and competition of individual titles is only heightened by the playability of the system as a whole.

So the next time you place a recent Nintendo 64 purchase into your collection, take a minute to step back and remind yourself of the potential collection you soon could be housing. With countless console variations of equal worth, a huge back-catalogue of fantastic games and a library of rare treasures to be had, there has never been a better time to get into collecting for the Nintendo 64.

THE PERIPHERALS

» A number of games were cancelled for the 64DD , including *Cubivore: Survival Of The Fittest, Earthbound 64* and *SimCopter.*

THE 64DD UNIT

The 64DD (Dynamic Drive) unit, on the surface, appeared to be a strategic decision for Nintendo, in light of the exterior add-ons available for its previous two consoles: the FDS for the Famicom and the Satellaview for the Super Famicom. In Japan, at least. The reality was a lot less smooth. First announced in 1995, it took Nintendo another four years to finally release the unit. Anticipating low sales from the off, the unit wasn't even initially sold via retailers, but as part of a year-long subscription service that guaranteed an online connection (via RANDnet) and availability of software.

Specifications-wise, the 64DD did have potential. Many games in the early days of N64 development were planned to either be sold for or interact with the unit. Gamers drooled at the prospect of a more expansive *Zelda* than was ever thought possible on cartridge, or the ability to dynamically alter worlds depending on choices made during the game. The rewritable aspect of the media opened the possibility of countless customisation, real-time updating, and hopes of establishing another form of cheap mass storage, essential to compete with the CDs being used by the Sony PlayStation.

Whatever the reasons Nintendo had for delaying the unit, it caused irreversible damage to development and the cancellation of most projects assigned to it. Some of the games ended up on normal cartridge (*Ocarina Of Time, Hybrid Heaven, Paper Mario, Ogre Battle 64*), but the rest disappeared, including games such as *Cabbage, Jungle Emperor Leo* and *Dezaemon DD*, together with all add-on disks bar the *F-Zero* kit.

To date, only two other games are known to still have the 'hook' programming within their code to access the 64DD unit during play. *Ocarina Of Time* is the more well known, given hackers split the code apart and discovered when the game would have looked for new data from the 64DD. Thankfully, that project was one that was finally released in the form of the Master Quest on the first promotional *Zelda* Gamecube disc. The other is *Mario Party,* suggesting Hudson planned to release expansions on disk but they ended up as seperate cartridges instead.

The unit itself was made available from December 1999, although the actual online RANDnet service didn't begin until February 2000. Subscribers had the ability to order future software through the service, which was the only way to acquire it, chat to other users, swap scores, play demos and browse the internet. By the end of 2000, however, Nintendo cancelled the project, and in March 2001 the online service was stopped completely. In effect, the 64DD unit had a lifespan of only twelve months.

Discounting the RANDnet access disk itself, there were only nine pieces of software released for the unit in that year. For the most part they are not tricky to track down, although the last two programs, *Kyojin No Doshin: Kaihou Sensen Chibikko Chikko Daishuugou* and *Japan Pro Tour Golf 64* are hard to find by virtue of their lateness, the aforementioned online-only availability and a low print run (3,000) of each.

...AND THE REST

01. Keyboard

■ The keyboard was designed and supported only via the RANDnet service with the N64DD unit, allowing members to properly type emails and messages to other users without having to rely on a convoluted and frustrating on-screen input system. Ergonomically it looks much like a PC (rōmaji) keyboard but with added symbol functionality.

02. Rumble Pak

■ The Rumble Pak was bundled with *Starfox 64* (or *Lylat Wars* in Europe) and then sold separately a few months later. Arguably the inspiration for rumble being included inside controllers since, it was supported by a staggering amount of games, although only a few of them (such as *Ocarina Of Time*) actually used it for specific gameplay functionality.

03. Expansion Pak

■ Initially bundled with *Donkey Kong 64* (and, in Japan, *Majora's Mask* and *Perfect Dark*) along with the 64DD unit itself, the Expansion Pak increased the memory of the N64 from 4MB to 8MB. While the aforementioned three games were the only titles that required the extra memory to function, many other titles supported it to provide either higher resolutions or better quality textures.

04. Bio Sensor

■ The Bio Sensor was a Japan-only device designed to interact with *Tetris 64*, where one end plugged into the controller and the other clipped onto the player's ear. While the game delivered the expected *Tetris* experience, one mode sped up or slowed down the action based upon the player's heart rate. Limited for sure, but a curiosity nonetheless.

05. Hori controllers

■ While these Hori controllers are for the N64, it is curious to note they share a number of characteristics with the Gamecube controller. Released in 2000, evidently Hori must have been privy to some of Nintendo's upcoming design ideas and used them accordingly. Available in a range of colours, they are quite ergonomic and highly sought after.

06. Transfer Pak

■ The Transfer Pak plugged into the controller and enabled the N64 to transfer data between Game Boy cartridges and compatible N64 titles. While likely created for *Pokémon* players to transfer and compete using their Game Boy rosters in *Pokémon Stadium*, it was also useful for importing user created players into *Mario Golf* and *Mario Tennis*.

07. Import Adaptor

■ Due to the N64 having so many great games that weren't released on PAL, it makes sense to own an import adaptor. The Passport 3 Adaptor is one of the best due to its high compatability with so many essential games, but the one we've featured here is also worth considering.

The Collector's Guide

TOP 5 GAMES TO PLAY

01. Super Mario 64

■ Setting the 3D platformer standard for many, many years to come while offering hours of gameplay, *Super Mario 64* should be the first game to arrive in any Nintendo 64 collection.

02. The Legend of Zelda Ocarina of Time

■ Often referred to as the greatest adventure game of all time, *Ocarina Of Time* has won many gamers over and put the *Zelda* series into the limelight for a lifetime.

03. GoldenEye 007

■ While it hasn't aged gracefully, Rare's first-person shooter *GoldenEye 007* holds many special memories for N64 gamers and has plenty to offer for newcomers.

04. Mario Kart 64

■ Picking up from where the Super Nintendo classic left off, *Mario Kart 64* is easily the best four-player party game around, offering hours of friendship-breaking gameplay.

05. Super Smash Bros.

■ Ever wondered who would win in a battle between Pikachu, Samus and Link? An amusing four-player brawler, *Super Smash Bros.* leaves no room for niceties between friends.

PLAY THESE NEXT

Banjo-Kazooie

International Superstar Soccer 98

Pilotwings 64

Blast Corps

F-Zero X

Conker's Bad Fur Day

Perfect Dark

Space Station Silicon Valley

Excitebike 64

Pokémon Snap

TOP 5 IMPORT GAMES

01. Susume! Taisen Puzzle Dama Toukon! Marumata Chou

■ Get ready for a Konami's quirky cross between *Puyo Puyo* and *Columns*. Match three or more to start chain combos in this great two-player puzzler. Highly recommended.

02. Ogre Battle 64: Person of Lordly Caliber

■ Although it has been available on the Virtual Console for some time, the original US version of this cult SRPG continues to climb in price.

03. Harvest Moon 64

■ The follow up to the popular SNES game never appeared in the UK, so if you want an English language version you're going to have to have deep pockets and look abroad.

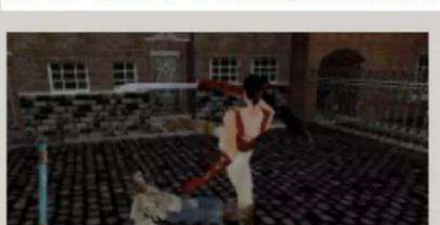
04. Bakuretsu Muteki Bangai-O

■ One of Treasure's finest on the system is also one of the most expensive. This addictive shooter will set you back a fair amount if found in good condition.

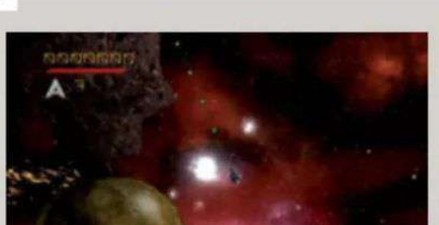
05. Tsumi to Batsu - Hoshi no Keishousha (Sin & Punishment)

■ The cream of the crop and easily the most desirable title from the import Nintendo 64 library. On-rails shooter *Sin & Punishment* is a genuine treasure worthy of a space in any games collection.

IMPORT THESE NEXT



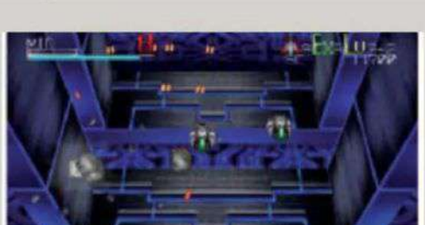
Nightmare Creatures



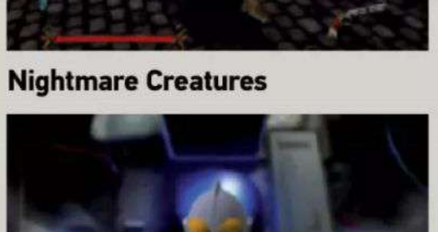
Asteroids Hyper 64

Fighter Destiny 2

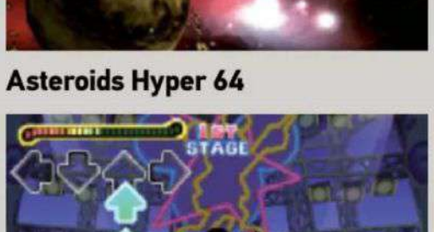
Razor Freestyle Scooter



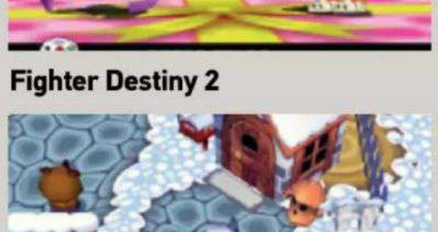
Star Soldier: Vanishing Earth



PD Ultraman Battle Collection 64



Dance Dance Revolution Disney Dancing Museum



Dobutsu No Mori

Neon Genesis Evangelion

Goemon: Mononoke Sugoroku

The Collector's Guide

TOP 5 RAREST PAL GAMES

01. Airboarder 64

■ Attempting to muscle in on Tony Hawk's territory, *Airboarder 64* is a mediocre futuristic boarding game with little to offer other than its impressive rarity.

02. Hercules: The Legendary Journeys*

■ This lackluster attempt to steal *Zelda*'s spotlight went pretty much unnoticed, as Titus' adventure game *Hercules* is nothing but an unplayable mess. Sadly, what doesn't sell well becomes rare.

03. Major League Baseball Featuring Ken Griffey Jr*

■ To the majority of European audiences, Baseball is an American sport. The Australians, however, would disagree, as would their PAL-exclusive Baseball release for the Nintendo 64.

04. Snowboard Kids 2*

■ Regardless of the popularity of the first *Snowboard Kids* game, the sequel remains almost unheard of, and in terms of PAL regions exclusively released in Australia.

05. Starcraft 64*

■ *Starcraft* made its way onto the N64 in 2000, but remained exclusive to Australia and North America. Its rarity and very high price tag will no doubt send you looking for the PC version instead.

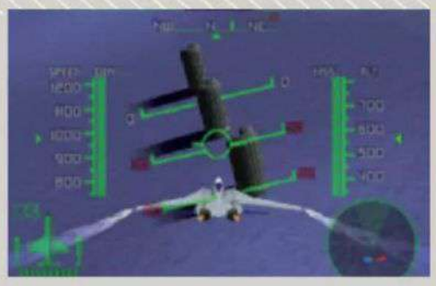
GET THESE NEXT

Aidyn Chronicles: The First Mage

Gex 3: Deep Cover Gecko

Knockout Kings 2000

Off Road Challenge



AeroFighters Assault

Rocket - Robot On Wheels

Blues Brothers 2000

BattleTanx: Global Assault

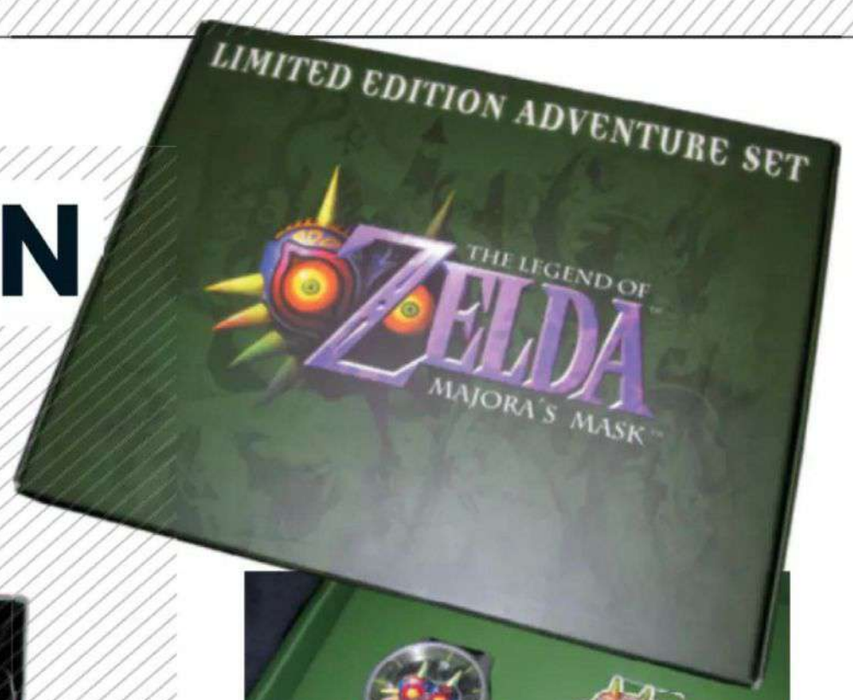
Mortal Kombat Mythologies: Sub Zero

HSV Adventure Racing

* These US versions are easier and cheaper to secure than their Pal counterparts

THE JEWEL IN THE CROWN

Every system has a game that all collectors would love to own no matter its cost. This month, we examine the lavish Majora's Mask Limited Edition Adventure Set



The Watch

■ Considering that *The Legend Of Zelda: Majora's Mask* deals with time travel, it should come as no surprise to learn that a watch was included with this limited edition pack. The watch was only released with the box set, so just 1,000 exist.

The CD

■ The music of *Majora's Mask* is incredibly ambitious in scope – so much, in fact, that it needed to be crammed onto two CDs. Although it contains no additional tracks, it does feature a totally different cover to the commercial release.

The T-Shirt

■ A high-quality T-Shirt finishes off the Limited Edition Adventure Set. Featuring the logo that adorns the original box, it's a fitting addition to the box set and rounds off an impressive package. Just be aware that it's only available in size Large.

Special thanks to Janne Kaitila for giving us access to his collection and to Jan Baart and Lasse Erkola

The Collector's Guide

THE COMPLETE CHECK LIST OF PAL N64 GAMES*

VERY RARE

- [ ] Aidyn Chronicles: The First Mage
- [ ] Airboarder 64
- [ ] BattleTanx: Global Assault
- [ ] Fighting Force 64
- [ ] Gex 3: Deep Cover Gecko
- [ ] Hercules: The Legendary Journeys
- [ ] Knockout Kings 2000
- [ ] Madden NFL 99
- [ ] Major League Baseball Featuring Ken Griffey Jr
- [ ] Mortal Kombat Mythologies: Sub-Zero
- [ ] NBA Pro 99
- [ ] NFL Quarterback Club 2000
- [ ] Off Road Challenge
- [ ] Resident Evil 2
- [ ] Rocket: Robot On Wheels
- [ ] San Francisco Rush 2049
- [ ] Snowboard Kids 2
- [ ] Starcraft 64
- [ ] Top Gear: Hyper Bike

RARE

- [ ] Aerofighters Assault
- [ ] Blues Brothers 2000
- [ ] Centre Court Tennis
- [ ] Chameleon Twist 2
- [ ] Charlie Blast's Territory
- [ ] Conker's Bad Fur Day
- [ ] Destruction Derby 64
- [ ] F1 Racing Championship
- [ ] Flying Dragon
- [ ] Gauntlet Legends
- [ ] Hexen
- [ ] Hydro Thunder
- [ ] International Superstar Soccer 2000
- [ ] Kirby 64: The Crystal Shards
- [ ] Milo's Astro Lanes
- [ ] Mortal Kombat Trilogy

RakugaKids

- [ ] Mystical Ninja 2 starring Goemon
- [ ] NBA in the Zone 2000
- [ ] NBA Jam 99
- [ ] NBA Jam 2000
- [ ] NBA Live 99
- [ ] NBA Live 2000
- [ ] NBA Pro 98
- [ ] NFL Quarterback Club 99
- [ ] NHL 99
- [ ] NHL Breakaway 98
- [ ] NHL Breakaway 99
- [ ] NHL Pro 99
- [ ] Nuclear Strike 64
- [ ] Olympic Hockey 98
- [ ] Penny Racers
- [ ] PGA European Tour
- [ ] Power Rangers (Saban's): Lightspeed Rescue
- [ ] Racing Simulation 2
- [ ] RakugaKids
- [ ] Rampage 2: Universal Tour
- [ ] Rat Attack
- [ ] Roadsters
- [ ] Robotron 64
- [ ] Rush 2: Extreme Racing USA
- [ ] Shadowgate 64: Trials Of The Four Towers
- [ ] Spacestation Silicon Valley
- [ ] Tarzan (Disney's)
- [ ] Top Gear Rally 2
- [ ] Tony Hawk's Pro Skater 2
- [ ] Tony Hawk's Skateboarding
- [ ] Toy Story 2: Buzz Lightyear to the Rescue!
- [ ] Vigilante 8
- [ ] War Gods
- [ ] WCW Mayhem

UNCOMMON

- [ ] Aero Guage
- [ ] All Star Tennis '99
- [ ] All-Star Baseball 99
- [ ] All-Star Baseball 2000
- [ ] Army Men: Sarge's Heroes
- [ ] Banjo-Tooie
- [ ] Bass Hunter 64
- [ ] Batman Of The Future: Return Of The Joker
- [ ] Bio F.R.E.A.K.S.
- [ ] Castlevania: Legacy Of Darkness
- [ ] Chameleon Twist
- [ ] Chopper Attack
- [ ] CyberTiger
- [ ] Daffy Duck Starring As Duck Dodgers
- [ ] Daikatana
- [ ] Dark Rift
- [ ] Donald Duck Quack Attack (Disney's)
- [ ] Doom 64
- [ ] Dual Heroes
- [ ] Duke Nukem 64
- [ ] Duke Nukem Zero Hour
- [ ] Extreme-G XG2
- [ ] G.A.S.P.!!: Fighters Nextreme
- [ ] Gex 64: Enter the Gecko
- [ ] Holy Magic Century
- [ ] Hot Wheels: Turbo Racing
- [ ] Iggy's Reckin' Balls
- [ ] Killer Instinct Gold
- [ ] Knife Edge
- [ ] Lode Runner 3-D

Quake

- [ ] Mace: The Dark Age
- [ ] Madden Football 64
- [ ] Mario Party 3
- [ ] Monster Track Madness 64
- [ ] Mortal Kombat 4
- [ ] Mystical Ninja Starring Goemon
- [ ] NBA Hang Time
- [ ] New Tetris, The
- [ ] NFL Quarterback Club 98
- [ ] Operation Winback
- [ ] Paper Mario
- [ ] Paperboy
- [ ] Pokémon Stadium 2
- [ ] Premier Manager 64
- [ ] Quake
- [ ] Quake II
- [ ] Rainbow Six (Tom Clancy's)
- [ ] Rampage: World Tour
- [ ] Re-Volt
- [ ] Ready 2 Rumble Boxing
- [ ] Road Rash 64
- [ ] Rugrats In Paris: The Movie
- [ ] S.C.A.R.S.
- [ ] San Francisco Rush: Extreme Racing
- [ ] Scooby Doo!: Classic Creep Capers
- [ ] Snowboard Kids
- [ ] South Park: Chef's Luv Shack
- [ ] South Park Rally
- [ ] Starshot: Space Circus Fever
- [ ] Supercross 2000
- [ ] Superman
- [ ] Taz Express
- [ ] Tigger's Honey Hunt
- [ ] Tom And Jerry In Fists Of Fury
- [ ] Tonic Trouble
- [ ] Top Gear: Overdrive
- [ ] Turok 3: Shadow Of Oblivion
- [ ] Turok: Rage Wars
- [ ] Twisted Edge Snowboarding
- [ ] Vigilante 8: 2nd Offence
- [ ] Virtual Chess 64
- [ ] Virtual Pool 64
- [ ] Wayne Gretzky's 3D Hockey
- [ ] Wayne Gretzky's 3D Hockey '98
- [ ] WCW/NWO: Revenge
- [ ] WCW/NWO: World Tour

EXTREMELY RARE Games that have less than a few dozen known copies available.

VERY RARE Very hard to come by. Expect to see only a couple of copies per year.

RARE You should be able to source these in a reasonable amount of time.

UNCOMMON You won't find them straight away, but you will after a search.

COMMON Always just a click away for the average collector.

VERY COMMON So common you'll find them in virtually any bundle of games.

- ☐ Wetrix
- ☐ World Driver Championship
- ☐ World League Soccer 2000
- ☐ Worms Armageddon
- ☐ WWF Wrestlemania 2000
- ☐ Xena: Warrior Princess

COMMON

- ☐ 007: The World Is Not Enough
- ☐ Armorines: Project S.W.A.R.M.
- ☐ Automobili Lamborghini
- ☐ Beetle Adventure Racing!
- ☐ Blast Corps
- ☐ Body Harvest
- ☐ Bomberman 64
- ☐ Bomberman Hero
- ☐ Buck Bumble
- ☐ Bug's Life, A
- ☐ Bust-A-Move 2: Arcade Edition
- ☐ Bust-A-Move 3 DX
- ☐ Carmageddon 64
- ☐ Castlevania
- ☐ Clayfighter 63 1/3
- ☐ Command & Conquer
- ☐ Cruis'n USA
- ☐ Cruis'n World
- ☐ Donkey Kong 64
- ☐ Earthworm Jim 3D
- ☐ ECW: Hardcore Revolution
- ☐ F1 World Grand Prix
- ☐ F1 World Grand Prix II
- ☐ Fighters Destiny
- ☐ Forsaken
- ☐ Glover
- ☐ Hybrid Heaven
- ☐ International Track & Field: Summer Games
- ☐ Jeremy McGrath Supercross 2000
- ☐ Jet Force Gemini
- ☐ Kobe Bryant in NBA Courtside
- ☐ The Legend Of Zelda: Majora's Mask
- ☐ LEGO Racers
- ☐ Magical Tetris Challenge
- ☐ Mario Golf
- ☐ Mario Party 2
- ☐ Mickey's Speedway USA
- ☐ Micro Machines 64 Turbo
- ☐ Mischief Makers
- ☐ Multi Racing Championship
- ☐ Nagano Winter Olympics '98
- ☐ NASCAR 99
- ☐ Perfect Dark
- ☐ Pokémon Puzzle League
- ☐ Pokémon Snap
- ☐ Rayman 2: The Great Escape
- ☐ Ridge Racer 64
- ☐ Rugrats: Treasure Hunt
- ☐ Shadow Man
- ☐ South Park
- ☐ Star Wars: Episode 1: Battle for Naboo
- ☐ Star Wars: Episode 1: Racer
- ☐ Star Wars: Shadows Of the Empire
- ☐ Super Smash Bros.
- ☐ Tetrisphere
- ☐ Top Gear Rally
- ☐ Turok: Dinosaur Hunter
- ☐ Waialae Country Club: True Golf Classics
- ☐ WipEout 64
- ☐ WWF Attitude: Get It!
- ☐ WWF No Mercy
- ☐ WWF War Zone
- ☐ Yoshi's Story

VERY COMMON

- ☐ 1080° Snowboarding
- ☐ Banjo-Kazooie
- ☐ Diddy Kong Racing
- ☐ Excitebike 64
- ☐ Extreme-G
- ☐ F-Zero X
- ☐ F1 Pole Position 64
- ☐ FIFA 64
- ☐ FIFA 99
- ☐ FIFA: Road to World Cup 98
- ☐ GoldenEye 007
- ☐ GT 64: Championship Edition
- ☐ International Superstar Soccer 64
- ☐ International Superstar Soccer 98
- ☐ The Legend Of Zelda: Ocarina Of Time
- ☐ Lylat Wars
- ☐ Mario kart 64
- ☐ Mario Party
- ☐ Mario Tennis
- ☐ Mission: Impossible
- ☐ Pilotwings 64
- ☐ Pokémon Stadium
- ☐ Star Wars: Rogue Squadron
- ☐ Super Mario 64
- ☐ Turok 2: Seeds Of Evil
- ☐ V-Rally: Edition 99
- ☐ Wave Race 64
- ☐ World Cup 98

Lylat Wars

*** Rarity guide courtesy of RetroCollect. Head to www.retrocollect.com for more information**

Castlevania

FANGS FOR NOTHING, KONAMI

RETROREVIVAL

» NINTENDO 64 » KONAMI » 1999

I've recently completed *Castlevania: Lords of Shadow* for a second time. It's a superb game that not only makes great use of the fanchise, but is a remarkable collaboration between Hideo Kojima and Mercurysteam. It's also the first good 3D *Castlevania* game and does a wonderful job of making me forget this calamitous effort from 1999 that very nearly put me off the series for good.

Starting off with a wonderfully eerie image of a young boy playing the violin (accompanied by some truly beautiful music), *Castlevania* slid downhill faster than a bobsleigh team winning gold and proved that even the mighty Konami wasn't infallible.

Plagued by a troubled production – two main characters were hastily dropped in order to ensure that the game hit its projected 1999 deadline – the move to 3D was not a smooth one for the hallowed franchise. Ignoring the intricately designed gameplay of the brilliant *Symphony of the Night*, *Castlevania* featured a more linear affair that aped the original NES games. This in itself was fine, but Konami crippled its first 3D *Castlevania* outing with a hyperactive camera that very rarely did what you wanted it to do, spongy controls that made the trademark platforming extremely difficult and large empty grey/brown areas that gave you very little to do.

There were certainly a few clever ideas – a less positive different ending was unlocked if you didn't complete the adventure in a certain number of game days – and new enemies like the motorbike-riding skeletons were certainly a giggle. However, it just wasn't enough. *Castlevania* lumbered from one dull area to the next, and the bland locations, dismal level design and infuriating camera issues were a world away from earlier games in the series. Little wonder that Koji Igarashi was brought back in to get the series back on track again.

Castlevania is the perfect example of a developer completely failing to rebottle 2D lightning, and we really do hope that whoever tackles a 3D *Castlevania* next plays *Castlevania* and its sequel *Legacy of Darkness* to death. Just to ensure that such a nasty blot never mars one of our favourite franchises again. ✱

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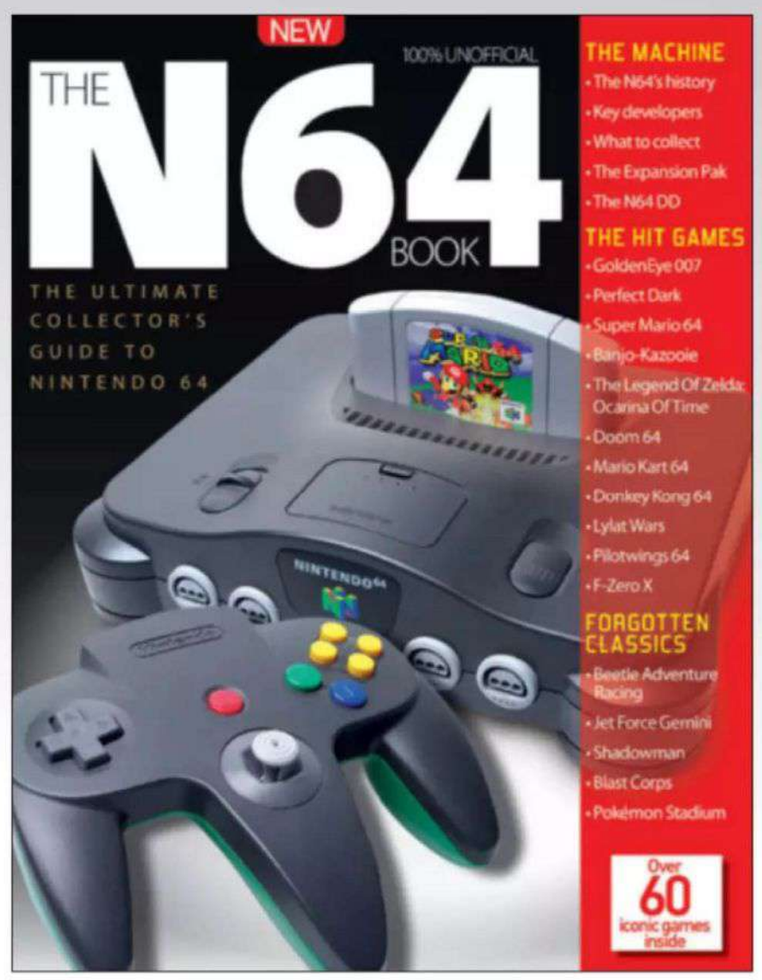

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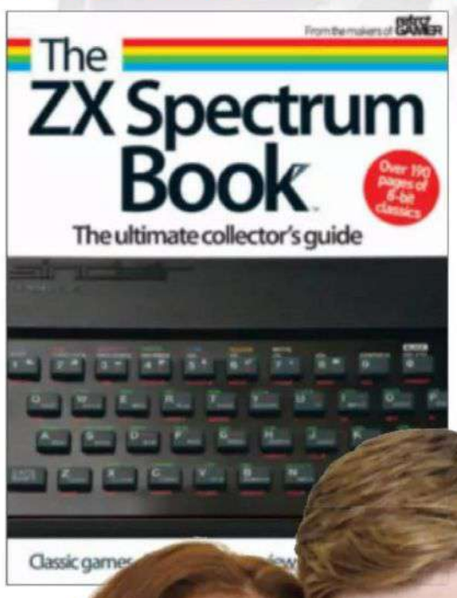
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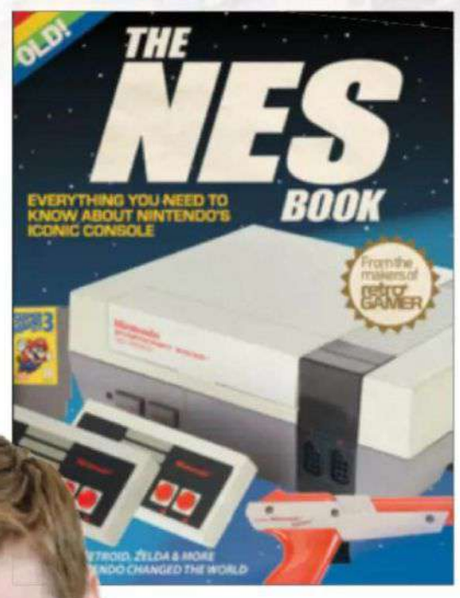

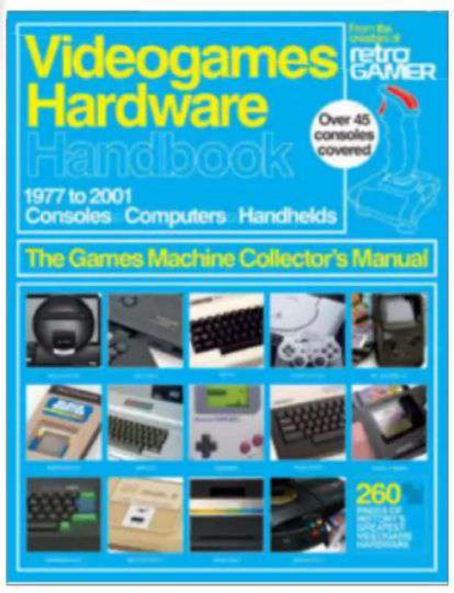

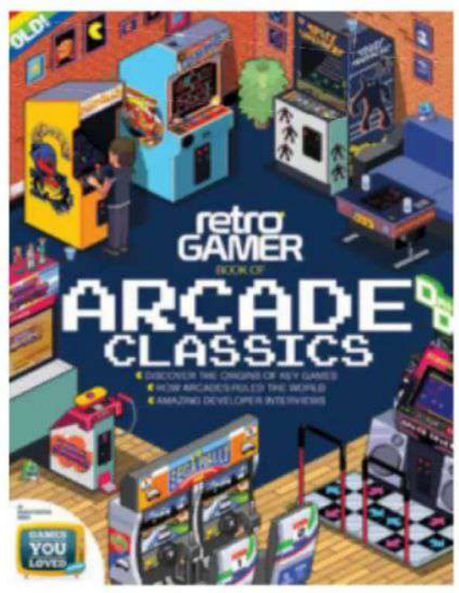

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